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IRRIGATION DEPARTMENT, PUNJAB.

ADMINISTRATION REPORT

FOR

1917-18.

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IRRIGATION DEPARTMENT, PUNJAB. ADMINISTRATION REPORT

FOR
1917-18.

ERRATA.

Make the following corrections in the above report and in the Statistical Statements, etc., connected therewith :—

PART I. No. 1.

On page 4 of the Resolution by His Honour the Lieutenant-Governor, Punjab—

(i) In table showing working expenses—

Against	In column	For	Read
<i>Native States.</i>		Rs.	Rs.
Major Works	5	10,52,614	10,54,906
Total	5	10,50,376	10,62,668

(ii) In table showing net revenue—

<i>Native States.</i>		Rs.	Rs.
Major Works	5	15,87,904	15,85,612
Total	5	15,48,014	15,45,722

No. 2.

Chief Engineer's Report.

On page 2 in paragraph 4 under I-Canals in operation classed as productive—*Major Works.*

<i>For</i>	<i>Rs.</i>	<i>Read</i>	<i>Rs.</i>
Income from all sources less refunds (Rs. 12,295) ...	3,78,03,274	Income from all sources less refunds (Rs. 12,304) ...	3,78,03,265
Working Expenses less refunds (Rs. 12,295) ...	1,11,03,852	Working Expenses less refunds (Rs. 12,304) ...	1,11,03,851
Balance Excess Revenue, etc. ...	2,66,99,422	Balance Excess Revenue, etc. ...	2,66,99,414
Net profit after paying interest in 1917-18 ...	1,92,15,030	Net profit after paying interest in 1917-18 ...	1,92,15,022

No. 3.

In the statement printed on pages 4 and 5—

Against	In column	For	Read
Serial No.		Rs.	Rs.
8 {	6	16,47,347	16,49,338
	14	3,78,03,274	3,78,03,265
10 {	6	9,13,857	9,13,856
	14	1,11,03,852	1,11,03,851
14 {	6	16,67,703	16,67,702
	14	1,85,88,244	1,85,88,243
16 {	6	— 24,416	— 24,424
	14	1,92,15,030	1,92,15,022
24 {	6	7,29,490	7,29,482
	14	2,66,99,422	2,66,99,414

No. 4.

In the third line of paragraph 3 on page 6 for Rs. 24,709 substitute Rs. 24,647.

No. 5.

In second line of paragraph 7—*Contribution*—on page 7 for 'Rs. 2,20,460 or 19 per cent.,' substitute 'Rs. 2,18,168 or 18.71 per cent.'

No. 6.

In the first 3 lines of paragraph 7 on page 18—

<i>For</i>	<i>Substitute</i>
Rs.	Rs.
16,43,317	16,43,338
9,13,857	9,13,856
7,29,490	7,29,482

No. 7.

In the third line of sub-paragraph 4 (of paragraph 4) on page 25 expunge bracket—' (' from the beginning of the words Upper Chenab.

No. 8.

In line 14 on page 27 expunge ' ; ' falling after the word keenest and in the 8th line from the bottom of the same page, expunge the word 'that' coming between the words 'the' and 'fact.'

No. 9.

In the last column of table in paragraph 7 on page 28, insert decimal point between 18 and 29 against Percentage on Capital.

No. 10.

In the margin of paragraph 3 under Shahpur Imperial (Inundation Canals) on page 32, for 'repirs' read 'repairs.'

PART II.—Statistical Statements.

No. 11.

In statement 1-C. printed on pages 6—7—

Against	In column	For	Read
		Rs.	Rs.
Western Jumna Canal— <i>Contribution</i> ...	19	31,3 7	33,609
	21	35,114	40,406
	27	1,07,727	1,10,012
	28 and 30	1,08,114	1,10,406
	31	2,20,460	2,18,168
Total— <i>Contribution</i> ...	19	1,18,748	1,21,040
	21	1,53,139	1,54,431
	27	10,41,121	10,43,413
	28 and 30	10,52,014	10,54,906
	31	15,37,901	15,35,612

No. 12.

In column 6 of Statement III-C. on page 10 against 'Total occupiers' rates' for 'Rs. 2,63,37,413 read 'Rs. 2,63,27,416.'

No. 13.

In Statement IV-C. on page 11—

Against	In column	For	Read
		Rs.	Rs.
Western Jumna Canal—Contribution ...	12	1,08,114	1,10,406
	13	1,02,780	1,90,238
	14	16-59	16-39
Total—Contribution ...	12	10,52,014	10,51,906
	13	9,59,941	9,57,849
	14	6-10	6-11

No. 14.

In Statement II-E. printed on page 20—

Against	In column	For	Read
		Rs.	Rs.
Western Jumna Canal (including Sires Branch British and Patiala).	9	14,78,635	14,81,127
	11	43-85	43-92
Sidhnai Canals ...	6	1,75,157	1,57,157

No. 15.

In the Schedule of occupiers' rates applicable to the Upper, Bari Doab Canal, printed on page 30, against Class IV, for the word 'fibes' read 'fibers.'

LAHORE:

F. W. WOODS,

The 24th March 1919.

Chief Engineer, Irrigation Works, Punjab.

ADMINISTRATION REPORT FOR THE YEAR 1917-18.

Part I.

TABLE OF CONTENTS.

Statements.

	PAGE.
Statement showing area irrigated by Punjab Canals—Major and Minor Works—with diagram	ii
Statement showing area irrigated by Punjab Canals—Major Works—with diagram	iii
Statement showing area irrigated by Punjab Canals—Minor Works—with diagram	iv
Statement showing financial results of Punjab Canals—Major Works	v

<i>Resolution by His Honour the Lieutenant-Governor of the Punjab and its Dependencies</i>	1-7
---------------------------------------------------------------------------------------------------	-----

Chief Engineer's Report.

General	1-5
Western Jumna Canal	6-9
Sirhind Canal	10-13
Upper Bari Doab Canal	13-16
Lower Bari Doab Canal	16-19
Upper Chenab Canal	19-21
Lower Chenab Canal	21-24
Upper Jhelum Canal	24-26
Lower Jhelum Canal	26-28
Upper Sutlej Division, Inundation Canals	29-30
Sidhnai Canals (including the Koranga, Fazilshah and Abdul Hakim Subsidiary Canals)	30-31
Indus Inundation Canals	31-33
Shahpur (Imperial) Inundation Canals	33-34
Ghaggar Canals	35-37
Lower Sutlej Inundation Canals (including Hajiwah Canal)	37-39
Chenab Inundation Canals	39-41
Muzaffargarh Canals	41-43
Shahpur (Provincial) Inundation Canals	43-44

Diagrams.

Diagrams showing Financial and Working Records, 1917-18—			
Western Jumna Canal ...	Between pages	6 & 7	of the report.
Sirhind Canal ...	"	12 & 13	" "
Upper Bari Doab Canal ...	"	14 & 15	" "
Lower Bari Doab Canal ...	"	18 & 19	" "
Upper Chenab Canal ...	"	20 & 21	" "
Lower Chenab Canal ...	"	22 & 23	" "
Lower Jhelum Canal ...	"	28 & 29	" "

PUNJAB CANALS.

Year.	AREA IRRIGATED, IN ACRES.		
	Punjab Canals, Major Works.	Punjab Canals, Minor Works.	Total.
1887-1888	1,422,775	918,328	2,341,103
1888-1889	1,719,957	997,428	2,747,385
1889-1890	1,863,456	994,710	2,858,166
1890-1891	2,033,500	982,956	3,016,456
1891-1892	2,144,392	1,019,154	3,193,546
1892-1893	1,817,882	1,079,709	2,927,591
1893-1894	1,923,654	958,664	2,862,318
1894-1895	1,855,858	1,063,296	2,919,154
1895-1896	2,852,383	939,200	3,791,583
1896-1897	3,619,303	960,119	4,609,413
1897-1898	4,053,289	1,158,360	5,211,649
1898-1899	3,872,501	981,264	4,853,765
1899-1900	4,381,972	859,522	5,241,494
1900-1901	4,612,852	1,357,699	6,000,551
1901-1902	4,491,838	981,521	5,473,359
1902-1903	4,864,274	815,690	5,679,964
1903-1904	5,610,787	779,517	6,390,304
1904-1905	5,089,132	617,252	6,306,384
1905-1906	6,163,369	751,067	6,914,436
1906-1907	5,902,995	803,317	6,706,312
1907-1908	5,515,386	521,558	6,039,944
1908-1909	6,385,050	969,076	7,353,146
1909-1910	6,117,004	969,697	7,086,611
1910-1911	6,270,757	936,295	7,227,042
1911-1912	7,469,615	862,217	8,331,832
1912-1913	7,431,251	968,130	8,429,381
1913-1914	7,351,721	971,743	8,323,464
1914-1915	7,883,628	1,079,413	8,963,041
1915-1916	7,932,531	902,279	8,834,811
1916-1917	8,493,867	1,085,957	9,579,824
1917-1918	7,986,388	1,077,513	9,063,901

From 1894-95 to 1905-06 the total areas shown are *net*, thereafter the areas are *gross*.

The areas include the Swat River Canal up to 1900-01, after which date the canal was transferred to the North-West Frontier Province.

PUNJAB CANALS, MAJOR WORKS.

YEAR.	AREA IRRIGATED, IN ACRES.			REMARKS.
	Kharif.	Rabi.	Total.	
1887-1888	645,846	776,929	1,422,775	Lower Chenab Canal opened.
1888-1889	715,632	1,034,325	1,749,957	
1889-1890	661,677	1,201,779	1,863,456	
1890-1891	757,535	1,275,965	2,033,500	
1891-1892	697,454	1,416,938	2,114,392	Sirsa Branch of Western Jumna Canal opened.
1892-1893	323,535	1,024,647	1,347,682	Decrease due entirely to the favourable winter rains of 1892-93 which greatly contracted the irrigated rabi area.
1893-1894	711,001	1,192,653	1,903,654	Decrease as compared with 1891-92 due to general rainfall in rabi 1893-94, and would have been greater but for new irrigation on Chenab Canal.
1894-1895	703,930	1,151,928	1,855,858	Decrease due to very favourable rainfall during rabi, particularly in Sirhind and Western Jumna Canal tracts.
1895-1896	985,827	1,866,556	2,852,383	Increase chiefly due to partial failure of rains of 1895 and subsequent drought.
1896-1897	1,551,969	2,114,304	3,666,273	Increase due to drought.
1897-1898	1,777,565	2,275,721	4,053,286	Increase due to favourable year for irrigation and extensions.
1898-1899	1,413,822	2,458,679	3,872,501	Decrease in kharif due to favourable state of rivers and scanty rainfall.
1899-1900	1,888,393	2,496,571	4,384,964	
1900-1901	2,351,174	2,288,678	4,639,852	
1901-1902	1,886,043	2,803,793	4,689,836	Lower Jhelum Canal opened.
1902-1903	2,071,663	2,792,911	4,864,574	The Upper Sutlej Inundation Canals were transferred from head "Minor Works" to "Major Works" from 1st April 1902.
1903-1904	2,450,739	3,165,048	5,615,787	The Indus Inundation Canals were transferred from head "Minor Works" to "Major Works" from 1st April 1903.
1904-1905	2,381,786	3,307,316	5,689,102	
1905-1906	2,224,460	3,868,911	6,093,371	Decrease in kharif due to cotton failure.
1906-1907	2,433,219	3,467,776	5,900,995	
1907-1908	2,826,201	3,289,095	6,115,296	Decrease due to abnormally low supplies in the rivers.
1908-1909	2,695,518	3,659,532	6,355,050	
1909-1910	2,885,870	3,631,131	6,517,001	
1910-1911	2,254,333	4,016,424	6,270,757	
1911-1912	2,755,324	4,714,321	7,469,645	
1912-1913	2,929,309	4,531,942	7,461,251	Upper Chenab Canal opened.
1913-1914	3,069,950	4,281,771	7,351,721	Lower Bari Doab Canal opened.
1914-1915	3,184,751	4,698,877	7,883,628	
1915-1916	2,886,578	5,095,954	7,982,532	Upper Jhelum Canal opened.
1916-1917	3,411,167	5,052,400	8,463,567	Decrease in kharif due to drought and abnormally low supplies in the rivers.
1917-1918	3,333,822	4,652,566	7,986,388	Decrease in rabi due to unusually low supplies in rivers and failure of winter rains.
				Decrease due to excessive rains in kharif and to some of the land flooded by rain in October not drying up early enough to permit of rabi irrigation.

The areas include the Swat River Canal up to 1900-1901, after which date the canal was transferred to the North-West Frontier Province.

From 1894-1895 to 1905-1906 the total areas shown are *net*; thereafter the areas are *gross*.

PUNJAB CANALS, MINOR WORKS.

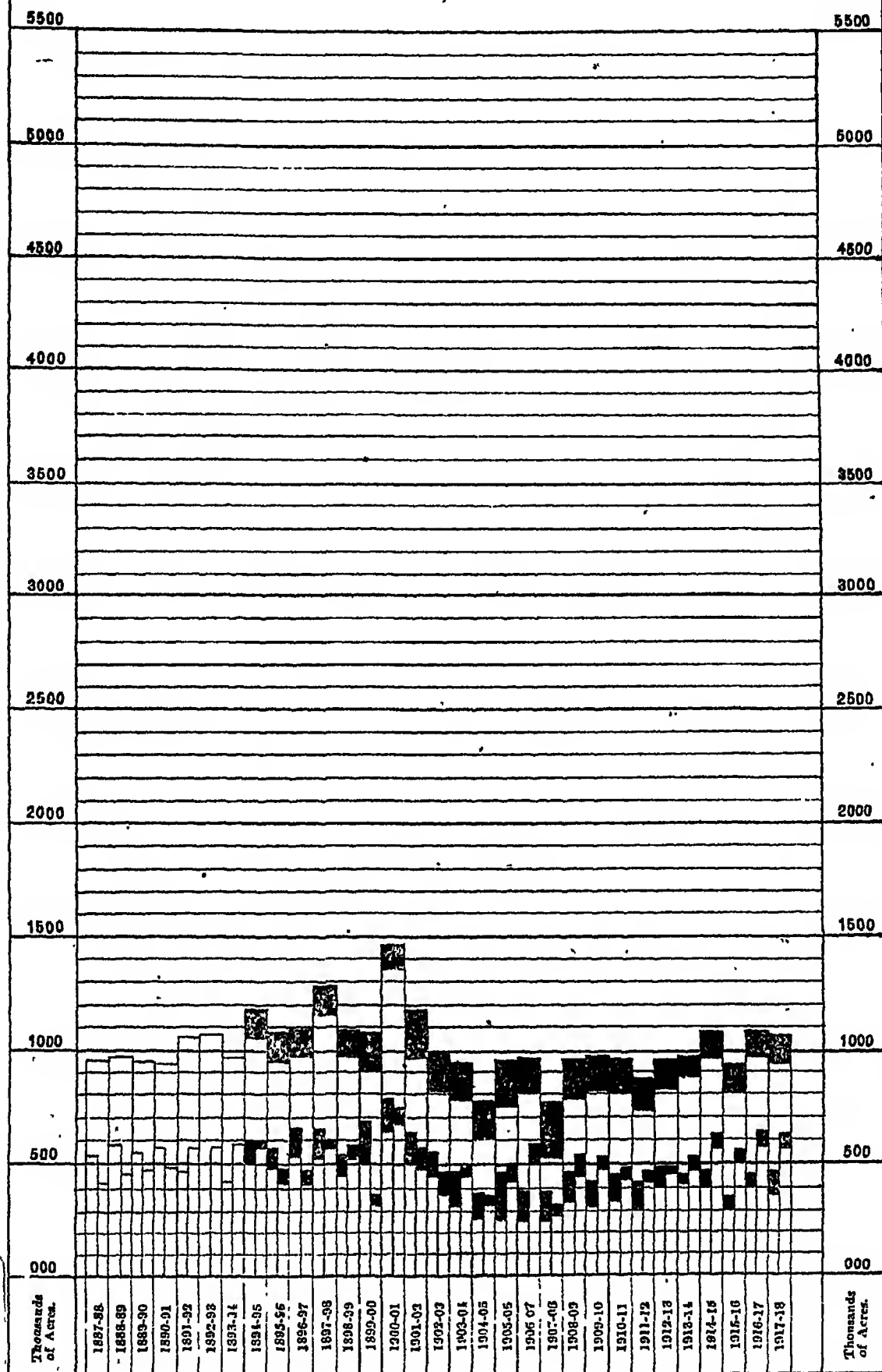
YEAR.	AREA IRRIGATED, IN ACRES.			REMARKS.
	Kharif.	Rabi.	Total.	
1887-1888	505,095	413,233	918,323	
1888-1889	571,558	425,870	997,428	
1889-1890	542,112	452,598	994,710	
1890-1891	520,408	462,548	982,956	
1891-1892	452,490	596,664	1,049,154	
1892-1893	491,151	588,558	1,079,709	Rivers rose late, but subsequent supplies were good, and rainfall was favourable, the result being the largest area on record up to date.
1893-1894	409,917	543,747	953,664	Decrease due to the destruction of kharif crops by high floods and to less favourable working of the canals.
1894-1895	500,213	563,048	1,063,261	
1895-1896	477,957	461,243	939,200	
1896-1897	533,745	426,365	960,110	
1897-1898	565,582	592,778	1,158,360	
1898-1899	453,402	530,862	984,264	
1899-1900	520,893	338,629	859,522	
1900-1901	669,563	688,136	1,357,699	
1901-1902	505,416	573,105	981,521	
1902-1903	424,819	390,871	815,690	Decrease due chiefly to the transfer of the Upper Sutlej Inundation Canals from head "Minor Works" to "Major Works" from 1st April 1902.
1903-1904	316,413	463,129	779,542	Decrease due chiefly to the transfer of the Indus Inundation Canals from head "Minor Works" to "Major Works" from 1st April 1903.
1904-1905	296,636	320,616	617,252	
1905-1906	298,279	452,788	751,067	
1906-1907	293,898	507,419	803,317	
1907-1908	258,074	266,484	524,558	
1908-1909	412,083	536,008	968,091	
1909-1910	426,020	513,587	969,607	
1910-1911	459,270	497,015	956,285	
1911-1912	402,641	459,606	862,247	
1912-1913	467,957	500,173	968,130	
1913-1914	464,872	506,871	971,743	
1914-1915	466,107	613,306	1,079,413	
1915-1916	362,607	539,672	902,279	Decrease due to drought and abnormally low supplies in the rivers.
1916-1917	452,348	633,609	1,085,957	
1917-1918	463,729	613,784	1,077,513	Decrease due to excessive rainfall.

The above includes the areas irrigated by the Shahpur Provincial Canals from 1890-1891 inclusive.

The above includes the areas irrigated on Ghaggar Canals, British and Bikaner State.

From the year 1894-1895 to 1905-1906 the areas shown are *net*; thereafter the areas are *gross*.

DIAGRAM **SHOWING TOTAL AREA IRRIGATED** **BY** **PUNJAB CANALS—MINOR WORKS.**



REFERENCES.

The first sub-division of each annual column denotes the "Kharif" area coloured red, and the second the "Rabi" area, coloured blue.

The black portions represent area remitted; the drab, net areas, from the year 1894-95.

PUNJAB CANALS, MAJOR WORKS.

Year.	Capital outlay, Direct and Indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Accumulated profits to end of year (column 4—column 3).	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1887-1888	5,76,25,828	3,18,46,764	5,09,35,681	1,90,88,867	40,05,923	17,01,248	23,04,675	3.09
1888-1889	5,80,48,409	3,40,74,453	5,33,27,633	1,92,53,180	43,64,994	19,72,087	23,92,007	4.06
1889-1890	6,00,88,478	3,63,49,603	5,61,80,320	1,93,80,512	49,66,787	21,14,115	28,52,652	4.74
1890-1891	6,24,71,881	3,86,93,767	5,98,37,074	2,11,43,207	53,86,440	21,73,636	36,59,754	5.85
1891-1892	6,70,91,026	4,11,74,523	6,36,23,126	2,24,51,603	60,40,990	22,51,938	37,89,052	5.65
1892-1893	6,97,92,824	4,37,98,997	6,79,53,641	2,42,84,847	68,09,149	24,51,631	43,57,518	6.24
1893-1894	7,34,59,876	4,65,48,772	7,08,59,491	2,44,40,713	51,50,907	24,46,060	29,05,847	3.95
1894-1895	7,64,95,575	4,94,29,472	7,42,01,493	2,47,75,691	59,05,551	26,50,549	33,15,002	4.83
1895-1896	8,02,57,667	5,24,41,535	7,87,76,591	2,63,85,026	70,88,254	28,40,474	42,57,780	5.31
1896-1897	8,41,00,205	5,56,01,219	8,06,34,033	3,10,32,817	1,00,44,443	30,87,005	78,57,443	9.34
1897-1898	8,70,19,885	5,89,92,163	8,56,36,275	3,67,41,053	1,21,89,419	31,85,227	90,02,192	10.35
1898-1899	8,92,16,831	6,22,52,641	10,44,91,814	4,22,00,173	1,24,07,093	35,51,505	88,55,588	9.93
1899-1900	9,09,47,216	6,57,49,457	11,27,77,761	4,80,28,274	1,34,14,861	41,28,714	92,85,944	10.21
1900-1901	9,20,75,977	6,82,70,350	12,40,93,246	5,48,21,837	1,46,16,136	43,01,651	1,03,14,485	11.20
1901-1902*	9,04,41,635	6,99,30,552	13,15,09,916	6,15,78,364	1,46,85,198	43,20,919	1,03,08,279	11.62
1902-1903	10,34,61,088	7,53,36,819	14,45,26,777	6,91,89,923	1,66,14,594	48,42,673	1,17,81,921	11.39
1903-1904	10,69,07,947	8,03,36,374	15,92,78,999	7,79,42,525	1,85,73,691	57,18,871	1,28,55,020	12.02
1904-1905	10,87,68,946	8,44,56,907	17,16,51,245	8,71,94,333	1,96,10,593	62,38,247	1,33,72,346	12.29
1905-1906	11,01,51,719	8,86,36,692	18,37,47,793	9,51,11,106	1,88,38,568	65,90,266	1,17,48,302	10.66
1906-1907	11,11,16,530	9,23,04,047	19,79,51,811	10,56,47,764	2,21,75,797	69,78,097	1,51,97,700	13.68
1907-1908	11,23,83,171	9,59,51,870	21,10,52,103	11,50,70,233	2,02,79,699	71,79,407	1,31,00,292	11.64
1908-1909	11,28,02,325	9,96,57,325	22,48,80,401	12,52,23,076	2,11,00,012	72,71,714	1,38,28,298	12.26
1909-1910	11,33,18,773	10,33,19,741	23,93,61,134	13,60,41,893	2,23,99,978	79,19,245	1,44,80,733	12.78
1910-1911	11,43,81,721	10,70,29,693	25,49,75,785	14,79,47,692	2,34,16,492	78,02,291	1,56,14,651	13.66
1911-1912	11,62,22,814	11,08,11,169	27,87,29,768	16,29,18,599	2,71,10,441	83,56,458	1,87,53,983	16.18
1912-1913	14,62,99,761	11,66,74,857	29,78,41,169	17,91,86,812	3,27,93,380	86,61,929	2,41,11,401	16.48
1913-1914	16,77,67,610	12,53,50,785	32,37,69,670	19,84,18,985	3,47,39,517	88,11,016	2,59,28,501	15.45
1914-1915	17,17,18,716	13,11,06,031	34,90,07,666	21,79,01,652	3,45,62,445	93,24,449	2,52,37,996	14.70
1915-1916	21,69,51,484	14,40,61,281	37,20,65,954	22,80,01,673	3,45,89,804	1,09,31,616	2,36,58,258	10.90
1916-1917	22,06,18,193	15,10,65,123	40,13,27,395	25,02,62,267	3,66,81,912	1,09,70,471	2,86,61,441	12.99
1917-1918	22,83,05,164	15,85,49,520	42,80,25,809	26,94,77,289	3,78,63,265	1,11,68,851	2,66,99,414	11.96

* Excludes the figures relating to the Swat River Canal, which now belongs to the North-West Frontier Province. The figures up to 1900-1901 include the figures of that canal.
The gross revenue in column 6 is that actually collected during the year and differs from the revenue as assessed on the area irrigated in the year.

GOVERNMENT OF THE PUNJAB.
PUBLIC WORKS DEPARTMENT.
Irrigation Branch.

No. 1067 R. I.

The 12th December 1918.

Resolution by His Honour the Lieutenant-Governor of the Punjab and its Dependence.

READ—

Administration Report by the Chief Engineer, Irrigation Works, Panjab, of the Canals in the Panjab for the year 1917-18.

Capital Outlay.

THE expenditure (direct and indirect) on Canals in operation classed as Productive or Major Irrigation Works, amounted to Rs. 26,92,939 (Imperial Rs. 26,88,971 and Contribution Rs. 3,968) as compared with Rs. 36,80,093 in the year 1916-17; making the total outlay, down to date, Rs. 23,87,86,899, including Rs. 1,51,81,735, contributed by Native States. The decrease in expenditure is due to the construction estimate of the Triple Canals having been closed, while few new works having been undertaken, in accordance with the policy of rigid economy during the currency of the War. Only works of urgent necessity were put in hand during the year. Now that peace conditions have been re-established a policy of more liberal expenditure on works which, at the same time, promote the interests of the people and of the State, is fully justified, and the Chief Engineers should set themselves to make up the leeway lost in recent years and pursue a programme of steady expansion for which local conditions provide ample scope.

2. The Imperial expenditure, during the year, of Rs. 26,64,069 was practically limited to the five canals connected with the Triple Project, viz:—

			Rs.
Lower Chenab Canal	...	...	1.64 lakhs.
Lower Jhelum Canal	...	...	2.92 „
Upper Chenab Canal	...	...	4.33 „
Upper Jhelum Canal	...	...	11.88 „
Lower Bari Doab Canal	...	...	5.87 „
		Total	26.64 „

On the Lower Chenab Canal the expenditure, as in the preceding year, was incurred chiefly on the much needed work of raising the crest of the weir, and on the construction of main and subsidiary revetments upstream of the Pulkhu Spur.

The works carried out on the lower Jhelum Canal are detailed at page 26 of the report,

On the Triple Canal System the expenditure was incurred on works sanctioned but not completed at the end of the year 1916-17, when the construction estimate of those canals was closed.

Nature of Seasons.

3. The *rabi* season of 1917 was one of the driest on record, and there was little moisture in the soil for *khari* sowings. In April and May 1917, however, weather conditions changed and the rainfall of those months gave a great impetus to the sowing of cotton and sugarcane crops. The monsoon

rains commenced early in June and continued until the end of September ; the fall being abnormally heavy throughout, and particularly so in September and October. Under these conditions the demand for canal water in the *khari*f was not keen, whilst much damage was done to standing crops, particularly to cotton which in outturn was only from one-third to two-thirds of a normal crop, by excessive rainfall. All food-grains except rice gave a poor yield, while sugarcane benefited by the abundant moisture.

The abundant monsoon rainfall led to heavy *rabi* sowings without canal irrigation ; and the demand for canal water was slack from October to December 1917. The winter of 1917-18, like the preceding one, was exceptionally dry ; and the river supplies were insufficient to meet the keen demand, which continued from January to the end of the *rabi* season. The showers received in March did much good to the standing crops, especially to those that had been sown late, and though rather unequal the outturn of *rabi* crops was on the whole well up to the average. In both harvests the cultivators benefited by the abnormally high prices.

Areas irrigated, etc.

4. The areas irrigated and matured by works of all kinds compare as follows with the corresponding figures for the two previous triennia, and for the year 1916-17 :—

Particulars.	AVERAGE OF THE 3 YEARS ENDING		During 1916-17.	During 1917-18.
	1913-14.	1916-17.		
	Acres.	Acres.	Acres.	Acres.
<i>Imperial and Provincial.</i>				
Area irrigated	7,872,472	8,615,440	8,954,131	8,600,153
Area matured	7,353,273	8,075,574	8,351,600	7,976,035
<i>Native States.</i>				
Area irrigated	684,907	605,257	625,693	463,704
Area matured	574,189	601,847	621,751	461,639

The areas irrigated and matured under Imperial and Provincial were less by 353,973 acres, and 378,575 acres, respectively, than those of the year 1916-17, which reached the maximum ; but they were about the same as the average for the triennium ending 1916-17. With the exception of the Lower Bari Doab Canal, the Upper Jhelum Canal, both of which are still in process of development, the Upper Sutlej Inundation Canals, the Sidhnai Canals and the Chenab Inundation Canals, all the Canals in the Province show lesser areas irrigated than during 1916-17. On the Major Works the net decrease amounts to about 350,000 acres, whilst on the Minor Works it is only five thousand acres.

Of the Major Works, the Sirhind Canal, where irrigation fluctuates very markedly in inverse ratio to the rainfall, shows the poorest results ; the decrease amounting to 340,000 of acres, and the area irrigated being the lowest since 1910-11 ; the Western Jumna Canal, on which conditions are somewhat similar to the Sirhind comes next with a decrease of about 100,000 acres.

On the other Canals the decreases, as compared with 1916-17, are :—

	Acres.
Upper Bari Doab Canal	57,000
Upper Chenab Canal	54,000
Lower Chenab Canal	10,000
Lower Jhelum Canal	40,000
Indus Inundation Canals	61,000

The falling-off was due mainly to the excessive and prolonged monsoon rainfall, which enabled a large area to be sown and matured without canal irrigation; and in a lesser degree to some of the land flooded by rain in October not drying up early enough to permit of *rabi* sowings.

5. The areas on which irrigation charges were remitted amounted to 626,177 acres, as compared with 603,413 acres in the previous year. Deducting, however, from these figures, respectively, 101,814 acres, and 175,718 acres, on account of the remissions granted under Tenancy rules (mostly on the Lower Bari Doab Canal), not for failure of crops, but as part of the terms of colonization, the area of crops, that actually failed, either wholly or partially, amounted to 524,363 acres or 5.79 per cent. of the area sown, as compared with 428,940 acres or 4.48 per cent. in the previous year. The bulk of this, *viz.*, 307,270 acres, was due to excessive rainfall during *kharif* 1917. Cotton which produced plenty of leaf and branch, but little lint, was the chief sufferer. About 35,000 acres were damaged by hail.

The total area remitted under the head of bad soil was about 100,000 acres. About one-third of this area was on the Lower Bari Doab Canal; and the rest mostly on the Inundation Canals, where the assessments are in the hands of the Civil patwaris and the classification of causes of remission are perhaps not always accurate. The local officers have been asked to go carefully into this important question. The remissions were in the Lieutenant-Governor's opinion liberal, on the whole, but the policy appears to vary considerably on different canal systems, and he hopes that the Chief Engineer will endeavour to fix something approaching a common standard. A suitable means of comparison would be to show in the general report or in the table attached to it the percentage of remissions (other than under tenancy rules) by canals.

Financial Results.

Gross Receipts.—The financial results of the year under review are based on the revenue assessed and collected on the areas irrigated in *rabi* 1916-17 and *kharif* 1917. The gross receipts from works of all kinds compare as follows with the figures for the year 1916-17 and the two triennial periods ending 1913-14, and 1916-17:—

Particulars.	AVERAGE OF THE THREE YEARS ENDING		During 1916-17.	During 1917-18.
	1913-14.	1916-17.		
IMPERIAL AND PROVINCIAL.	Rs.	Rs.	Rs.	Rs.
Major Works	3,15,47,703	3,02,61,397	3,06,31,013	3,78,03,274
Minor Works	17,69,466	19,49,262	20,09,878	21,85,031
Total	3,33,07,229	3,22,10,659	4,10,41,890	3,99,88,305
NATIVE STATES.				
Major Works	23,67,696	25,23,391	27,09,091	25,00,518
Minor Works	15,746	19,216	27,953	17,873
Total	23,83,442	25,42,607	28,21,447	25,09,393

* Two years' average as the figures prior to the year 1912-13 are not available.

Under Imperial and Provincial the gross receipts amounted to Rs. 5 per acre matured whilst in the Native States the rate per acre was nearly Rs. 6.

The figures under Imperial and Provincial include Rs. 1,06,78,519 in the case of Major Works, and Rs. 10,87,378 in that of the Minor Works, on account of indirect receipts for Land Revenue, water-advantage rate due to the Canal, 'Malikana,' and interest at 4 per cent. on the sale-proceeds from Government waste land in the Colonies.

Working Expenses.—The working expenses for the year are compared below with the average figures of the two previous triennia and of the year 1916-17. They amounted to a rate of Rs. 1-8-0 per acre irrigated and matured;

a somewhat higher incidence than usual owing to the contraction of irrigation and the large areas of new cultivation which are still assessed below standard rates on the Triple Canal system :—

Particulars,	AVERAGE OF THE THREE YEARS ENDING		During 1916-17.	During 1917-18.
	1913-14.	1916-17.		
IMPERIAL AND PROVINCIAL.				
	Rs.	Rs.	Rs.	Rs.
Major Works	86,16,408	1,04,08,812	1,09,70,471	1,11,03,852
Minor Works	9,62,740	9,33,455	8,74,585	8,81,775
Total	95,79,208	1,13,42,267	1,18,45,056	1,19,85,627
NATIVE STATES.				
Major Works	8,89,611	9,29,827	10,16,700	10,52,014
Minor Works	6,821	5,532	8,130	7,563
Total	8,96,462	9,35,359	10,54,830	10,60,376

The increase in the amount of Working Expenses is partly due to heavy repair charges resulting from the damage caused to canal banks by the abnormally heavy monsoon rainfall especially on the Triple Canal system, where the banks have not yet consolidated, and heavy maintenance charges are necessary to ensure their running high supplies in the interests of irrigation. The increase was partly due to the debit of additional establishment charges owing to the closing of the Project Estimate of the Triple Canals and to the revision of the system of calculating these charges.

Net Revenue.—The net revenue for the year compares as follows with that of the previous periods :—

Particulars.	AVERAGE OF THE THREE YEARS ENDING		During 1916-17.	During 1917-18.
	1913-14.	1916-17.		
	Rs.	Rs.	Rs.	Rs.
<i>Imperial and Provincial.</i>				
Major Works	2,29,31,205	2,59,62,575	2,55,61,441	2,66,99,422
Minor Works	7,06,726	10,15,807	11,35,393	12,53,316
Total	2,37,28,021	2,69,68,382	2,97,06,834	2,79,52,738
<i>Native States.</i>				
Major Works	16,78,055	15,93,564	17,19,894	15,37,904
Minor Works	8,925	13,664	19,823	10,110
Total	16,86,980	16,07,248	17,69,217	15,48,014

The decrease on Major Works was attributable to the reduced area on which assessment and collections were made during the year. The increases of area on the Triple Canal System have not, owing to the delay in the opening of the Upper Jhelum, and the special climatic conditions of the year, come up to the anticipations in the Project forecast.

The decrease of revenue is further explained by the deduction from the Land Revenue account of the year of Rs. 8,34,000 on account of the increased cost of Civil Administration of the Lyallpur District during the 3½ previous years.

The net revenue earned by the Major Works on total income, including indirect receipts, but excluding interest charges, was 11·95 per cent. on the total Capital Outlay; whilst on direct receipts alone it was 7·17 per cent.

The interest charges for the year amounted to Rs. 74,84,392, and the net profit, after defraying interest charges, was Rs. 1,92,15,030 or 8·60 per cent. on the Capital Outlay to date. In the previous year the corresponding figures were Rs. 2,16,57,594 and 9·82 respectively. If direct receipts alone are considered the net profit, after defraying interest charges, comes to only 3·82 per cent. and it is important to bear this in mind, for the indirect receipts largely represent the natural advantages due to much of the land irrigated having been the property of Government and to the high prices obtained for such areas of Government land as have been sold. Excluding these the profits derived from the water rates alone are undoubtedly moderate. In the previous year the corresponding figures of net profit on direct receipts alone was 4·41.

The percentage of net revenue on Capital Outlay on the Major Works was as follows:—

Canal.	Excluding interest charges.	Including interest charges.
Western Junna Canal	10·98	7·67
Sirhind (Imperial) Canal	8·51	5·20
Upper Bari Doab Canal	10·52	13·17
Lower Bari Doab Canal	3·24	— 0·11
Upper Chenab Canal	3·52	0·16
Lower Chenab Canal	39·37	35·99
Upper Jhelum Canal	— 0·61	— 4·00
Lower Jhelum Canal	21·65	15·29
Upper Sutlej Inundation Canals	20·24	16·98
Sidhmal Canal	40·75	37·35
Indus Inundation Canals	1·42	— 1·05

The Western Junna, the Lower Bari Doab, the Upper Jhelum, the Upper Sutlej Inundation Canals and Sidhmal Canal alone show improved results as compared with the previous year.

General remarks:

7. This was the second year during which the winter waters of three rivers (Jhelum, Chenab and Ravi) were distributed on a fixed programme of rotation between the 5 connected canal systems (the Upper Jhelum, the Lower Jhelum, the Upper Chenab, the Lower Chenab and the Lower Bari Doab Canals.) The programme was worked successfully on methods which secured to each canal system an equitable share of the available water supply, and definite periods of full supply sufficient to work it efficiently, in rotation with the other systems. The river supplies were more favourable than was the case in the previous year, but the intense demand from January to April, necessitating rotational closures on all canals, put a great strain on the staff, and, though seriously depleted owing to the war, they were able to meet the situation with judgment and success.

8. The delay in the expansion of irrigation on the Triple Canal System has already been alluded to. The supply in the Upper Jhelum Canal has been steadily increased with due regard for the safety of the newly made ombankments, but the weather conditions were not favourable for development of irrigation on the Upper Chenab Canal. The Lieutenant-Governor has lately had under consideration the proposals of a Special Committee for simplifying:

the complicated Zone System on this canal and hopes that the simpler system now sanctioned will encourage the expansion of irrigation on sound lines. On the Lower Bari Doab Canal though much progress has been made and the prospects of the colony are very hopeful, the development of irrigation has been retarded, for reasons connected with colonization, and by the discovery of large areas of poor soil in the tracts commanded. Special experiments for the reclamation of these areas on the lines successfully followed in the Narwala experiment near Lyallpur are now in progress.

9. The length of channels in operation at the end of March 1919 was 19,529 miles, viz., 4,403 miles of main and branch canals and 15,126 miles of distributaries. Four miles of main and branch canals and 258 miles of distributaries were opened for the first time for irrigation during the year.

10. The estimated value of crops raised on all canals, for the year under review, is Rs. 33,36,99,916 as compared with Rs. 32,09,18,736 for the previous year. These figures represent Rs. 39.54 and Rs. 35.75, respectively, per acre matured; the increase reflecting the rise in value of agricultural produce, and it may be noted that the value of one year's crops considerably exceeds the total capital expenditure on all the Canal Systems up to date.

11. The facts mentioned in the last paragraph are a very strong argument for pushing on as rapidly as possible the various schemes for expansion which are now under consideration. The progress on the five important new schemes noticed in the last year's review is as follows:—

- (1) *The Sutlej Valley Canals.*—This scheme is at present under the consideration of Government of India and provides for two weirs on the Sutlej at Ganda Singhwala and Jamlera, and four canals off-taking from them, 1.50 on each bank. The land on the right bank is entirely in British territory while that on the left lies mainly in the Bahawalpur and Bikaner States. The estimated cost of the project is Rs. 990 lakhs and the anticipated annual irrigation about 1½ million acres.
- (2) *The Bhakra Dam Schemes.*—The proposed dam on the Sutlej at Bhakra (where it cuts its way through the Sivaliks) about 40 miles above the Head Works of the Sirhind Canal at Rupar, is intended to impound about 110,000 millions of cubic feet of water during the monsoon, without prejudice either to the existing irrigation on the Sirhind Canal, or to that projected in the Sutlej Valley Scheme. The estimate is now under preparation. Roughly the cost is estimated to be about 10 crores of rupees, and the annual irrigation about 1,100,000 acres.
- (3) *The Haveli Project.*—This project is still under consideration, but beyond collecting more data as to the river discharges likely to prevail when the Triple Canals are in full working order, nothing has been done in the way of revising the project, pending a decision on the Sutlej Valley Project.
- (4) *The Thal Project.*—Surveys were carried out, as a basis for comparative estimates of the cost of alternative designs for this project, in the Sind-Sagar Doab, between the Indus and Jhelum rivers. It is intended to secure nearly two million acres of irrigation annually out of a gross area of 5 million acres, a large proportion of which latter at present affords only precarious grazing for cattle. It is estimated that nearly two million acres of land much of which is Government property will be available for colonization after the requirement of the local population have been met. A return of over 7 per cent. on the estimated capital cost of about 8½ crores of rupees, is anticipated.
- (5) *Woolar Lake Barrage in Kashmir.*—This work, which has for its object the storing of water in the lake during the monsoon, for use in the Punjab Canals in the winter, is estimated to cost about 15 lakhs of rupees. Negotiations for its construction are being carried on with the Kashmir Darbar.

12. The problem of preventing the evils of water-logging resulting from seepage from water channels is receiving careful consideration. Surveys were carried out and schemes are in course of preparation on the Upper Chenab and Lower Chenab and Lower Jhelum Canals.

On the Upper Bari Doab Canal a separate Drainage Division has been formed, with the object of investigating the surface drainage problem, defects in which were brought to prominent notice by the abnormal rainfall of October 1917.

13. The posts of Chief Engineers were held by Messrs. W. F. Holms and F. W. Woods throughout the year, and the Lieutenant-Governor desires to thank both officers and the Department generally for their strenuous and successful work throughout a year of great strain.

Mr. Holms is now severing his connection with the Department in which he has accomplished so much and set such a high standard of public duty during the last thirty years. Sir Michael O'Dwyer is glad that his services to Government and to the public have been recognised by the grant to him, during the year, of the order of the O.I.E., and wishes him many long and happy years on his retirement.

By order of His Honour the Lieutenant-Governor,

F. W. WOODS,

*Secretary to Government, Punjab,
Public Works Department, Irrigation Branch.*

ADMINISTRATION REPORT

OF THE

CANALS IN THE PUNJAB

FOR THE YEAR

1917-18.

GENERAL.

1. The direct receipts and expenditure of the Irrigation Department during the year were as follows:—

CLASS OF WORKS.		Direct Receipts.	DIRECT EXPENDITURE.		
			Capital.	Working expenses.	Total.
		Rs.	Rs.	Rs.	Rs.
Major Irrigation Works.	Imperial ...	2,71,21,755	23,09,577	1,04,09,317	1,30,18,894
	Contributions ...	64,831	9,968	5,69,007	5,72,975
Minor Irrigation Works.	Imperial ...	0,99,212	28	7,88,646	7,88,674
	Contributions ...	...	12	4,135	4,147
Provincial Canals ...	...	48,501	...	45,072	45,072
GRAND TOTAL ...		2,82,86,995	26,18,585	1,18,16,177	1,44,29,762
Average of the three years ending 1916-17.		2,69,30,996	52,70,187	1,12,03,037	1,64,73,225

* Excludes "refunds of revenue."

2. The indirect revenue credited to the canals on account of Enhanced Land Revenue, etc., amounted to Rs. 1,17,65,897. The average credit on this account of the three previous years amounts to Rs. 1,19,54,952.

3. The following table shows the areas irrigated by the several canals in 1917-18 as compared with the averages of the previous triennium :—

Area irrigated.				Average of the three years ending 1916-17.	1917-18.
Names of canals.					
<i>Major Irrigation Works.</i>				Acres.	Acres.
Western Jumna Canal	...	{ Imperial ...	...	771,796	650,413
	...	{ Patiala State ...	...	71,881	74,912
Sirhind Canal	...	{ Imperial ...	...	879,028	551,734
	...	{ Patiala, Nabha and Jind States ...	...	526,168	380,160
Upper Bari Doab Canal	...	...	...	1,180,507	1,144,521
Lower Bari Doab Canal	...	...	...	829,145	621,600
Upper Chenab Canal	...	...	...	324,807	382,935
Lower Chenab Canal	...	...	...	2,294,340	2,277,125
Upper Jhelum Canal	...	...	...	117,605	177,006
Lower Jhelum Canal	...	...	...	820,142	765,470
Upper Sutlej Canals	...	...	...	341,859	437,857
Sidhnai Canal	...	...	...	300,122	318,442
Indus Canals	...	...	...	241,564	204,213
Total Major Irrigation Works.	{ Imperial ...	...	...	7,600,915	7,591,316
	{ Native States ...	...	...	597,499	455,072
<i>Minor Irrigation Works.</i>					
Shahpur Inundation Canals	...	{ Imperial ...	...	39,075	42,633
	...	{ Provincial ...	...	26,886	25,085
Ghaggar Inundation Canals	...	{ Imperial ...	...	21,908	21,823
	...	{ Bikaner State ...	...	7,758	8,671
Lower Sutlej Inundation Canals (including Hajiwah Canal)	...	...	...	340,575	365,184
Chenab Inundation Canals	...	...	...	198,319	229,042
Muzaffargarh Inundation Canals	...	...	...	564,832	385,075
Ravi Inundation Canals (Provincial)	...	...	...	...	...
Total Minor Irrigation Works.	{ Imperial ...	...	...	987,639	1,043,757
	{ Provincial ...	...	...	25,886	25,085
	{ Native States ...	...	...	7,758	8,671
Total Major and Minor Irrigation Works.	{ Imperial ...	...	...	8,588,554	8,575,073
	{ Provincial ...	...	...	26,886	25,085
	{ Native States ...	...	...	605,257	463,743
GRAND TOTAL				9,220,697	9,063,901

* Figures of one year only.

Financial results.

4. The canals in the Punjab show the following results for 1917-18 :—

I.—CANALS IN OPERATION—CLASSED AS PRODUCTIVE.

Major Works.

Capital expenditure during the year.	{ Direct charges ...	...	...	Rs. 26,09,577
	{ Indirect charges ...	...	...	79,394
Total				26,88,971
The capital invested to end of 1917-18 amounted to				22,33,05,164
Income from all sources less refunds (Rs. 12,295)				3,78,03,274
Working expenses less refunds (Rs. 12,295)				1,11,03,853
Balance excess revenue being 11·95 per cent. on Rs. 22,33,05,164				2,66,99,423
<i>Interest—</i>				
Total Direct outlay to 31st March 1918	...	...	Rs. 21,68,07,018	
Less half outlay during 1917-18	...	...	13,04,788	
Mean Capital at charge				21,55,02,230
Interest on Rs. 21,55,02,230 at 3·4730 per cent.				74,84,392
Net profit after paying interest in 1917-18				1,92,15,030
Ditto ditto 1916-17				2,16,57,594
Ditto ditto 1915-16				1,64,21,265

The earnings of the "9—Major Works" are shown in line 24 of the statement at pages 4 and 5.

II.—IMPERIAL CANALS, MINOR WORKS NOT CLASSED AS PRODUCTIVE.

No capital outlay was incurred during the year on those canals for which Capital and Revenue Accounts are kept, *viz.*, Shahpur Imperial and Ghaggar Canals except Rs. 28 incurred on the Ghaggar Canals. The total expenditure on such canals to end of year was, therefore, Rs. 5,92,071.

					Rs.
The income from all sources less refunds (Rs. 734) amounted to	...	...	...	...	20,68,434
Working expenses less refunds (Rs. 734)	...	...	...	...	8,82,297
Balance profit in 1917-18	...	...	...	...	12,36,137
Ditto 1916-17	...	...	...	...	11,36,719
Ditto 1915-16	...	...	...	...	9,44,305

The financial results of each Minor Work are shown in the body of the report.

III.—PROVINCIAL CANALS.

There is only one Provincial Canal in operation, *viz.*, the Shahpur Provincial Canal. The Ravi Inundation Canals now cease to exist, but the transactions shown in column 18 of the statement at page 5 relate to some adjustments effected.

					Rs.
The income from all sources less refunds (nil) amounted to	...	...	...	...	66,657
Working expenses less refunds (nil)	...	...	...	...	49,478
Balance profit in 1917-18	...	...	...	...	17,179
Ditto 1916-17	...	...	...	...	-1,326
Ditto 1915-16	...	...	...	...	-5,707

5. The total number of dismissals was 100 as against 110 in the previous year. Twenty-seven of these were dismissals after departmental enquiry, three after judicial enquiry, 23 for serious misconduct and 30 for inefficiency, as compared with 38, 5, 7 and 6, respectively, in the previous year. Other forms of punishments inflicted were penal transfers in two cases, stoppage of promotion in six cases, and reduction in rank or pay or both, in 9 cases, as compared with 24, 6 and 8, respectively, in 1916-17.

Two Zilladars, Lala Ramji Das and Munshi Nazir-ud-din, both in the Jhang Division, Lower Chenab Canal, were charged by the District Magistrates with bribery and corruption, and were suspended from service pending the result of their trial. This Department, by special request of the District Magistrates concerned, did not participate in the preliminary enquiries, which were conducted solely by the Police and Civil officials.

Lala Ramji Das was convicted by the Special Magistrate appointed to try him, but was subsequently acquitted on 3 out of 4 counts by the Sessions Judge and on the 4th by the Chief Court.

Nazir-ud-din was acquitted by Court in the first instance.

PARTICULARS.		Serial No.	CANALS IN OPERATION CLASSED AS PRODUCTIVE					
			Western Jumna Canal (including Sirsa Branch).	Sirhind Canal (Imperial).	Upper Bari Doab Canal.	Lower Bari Doab Canal.	Upper Chenab Canal.	Lower Chenab Canal.
1		2	3	4	5	6	7	8
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I.—Capital (direct and indirect) outlay to and of	1916-17 ...	1	1,78,93,755	2,55,92,818	2,18,87,358	2,18,74,263	8,53,42,184	3,28,55,018
	1917-18 ...	2	1,70,92,529	2,50,81,386	2,18,32,298	2,24,61,550	8,57,75,608	3,25,18,571
II.—Income realized during the year—								
Direct, viz., water rent and miscellaneous receipts.	1916-17 ...	3	29,43,440	42,20,885	45,89,989	7,61,989	23,03,678	87,82,076
	1917-18 ...	4	30,83,557	33,86,845	42,28,782	18,00,745	19,91,419	85,57,093
Indirect, viz., land revenue due to Irrigation Works, including water-advantage rate.	1916-17 ...	5	2,08,810	1,42,791	6,63,875	2,02,924	2,54,572	80,68,027
	1917-18 ...	6	2,80,276	99,174	7,13,843	2,82,002	8,58,630	87,06,092
Total Direct and Indirect	1916-17 ...	7	31,51,750	43,63,676	52,08,864	9,64,893	25,68,550	1,68,30,103
	1917-18 ...	8	33,12,833	34,86,019	49,42,180	16,43,347	23,45,069	1,52,68,175
III.—Charges (direct and indirect) for the year—								
Maintenance, including Establishment.	1916-17 ...	9	13,56,021	13,87,150	14,19,126	6,26,856	8,39,264	27,19,783
	1917-18 ...	10	13,70,721	12,54,493	18,34,185	9,13,857	10,80,613	24,60,611
Interest on Capital outlay	1916-17 ...	11	5,56,529	8,03,114	6,90,049	6,93,682	11,20,543	10,31,668
	1917-18 ...	12	5,86,344	8,47,427	7,32,705	7,59,906	12,00,643	10,89,523
Total	1916-17 ...	13	10,12,550	21,90,264	21,15,175	13,20,033	19,58,812	87,51,751
	1917-18 ...	14	10,67,065	21,01,919	20,66,890	16,67,703	22,87,255	85,60,034
IV.—Profit and Loss—								
Amount	1916-17 ...	15	12,89,200	21,73,412	30,93,089	-3,55,145	6,04,738	1,80,79,852
	1917-18 ...	16	18,58,769	18,33,100	28,76,291	-24,416	57,614	1,17,03,141
(a) Including Interest on Capital outlay.	Percentage on Capital outlay. 1916-17 ...	17	7.00	8.49	14.17	-1.62	1.71	40.42
	1917-18 ...	18	7.67	5.20	13.17	-0.11	0.16	35.99
On Direct income	Amount 1916-17 ...	19	15,87,419	28,33,735	31,20,563	1,35,616	14,70,414	60,42,293
	1917-18 ...	20	17,12,836	20,52,353	23,94,640	4,43,658	9,01,806	60,96,572
Percentage on Capital outlay.	1916-17 ...	21	8.59	11.07	14.29	0.63	4.16	18.67
	1917-18 ...	22	9.03	8.12	13.26	2.00	2.52	18.75
On total income, Direct and Indirect.	Amount 1916-17 ...	23	17,97,729	29,76,526	37,59,788	3,38,537	17,25,286	1,41,10,320
	1917-18 ...	24	19,43,112	21,80,527	36,07,997	7,29,490	12,53,456	1,38,02,664
(b) Excluding Interest on Capital outlay.	Percentage on Capital outlay. 1916-17 ...	25	10.15	11.68	17.35	1.55	4.88	43.61
	1917-18 ...	26	10.98	8.51	16.62	3.24	3.52	39.37

MAJOR WORKS.

					Total Productive.	IMPERIAL CANALS, MINOR WORKS, NOT CLASSED AS PRODUCTIVE.		PROVINCIAL CANALS.		Serial No.
Upper Jhelum Canal.	Lower Jhelum Canal.	Upper Sutlej (including Lower Sohag and Para).	Siddhant Canal.	Indus Inundation Canals.		Works for which Capital and Revenue Accounts are kept.	Works for which only Revenue Accounts are kept.	Shahpur Provincial Canals.	Ravi Inundation Canals.	
9	10	11	12	13	14	15	16	17	18	19
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
4,38,49,947	1,59,83,168	18,19,816	18,35,490	29,82,351	22,06,16,103	5,92,013	...	...	...	1
4,50,87,813	1,62,25,129	18,17,323	18,32,227	29,80,763	22,33,05,104	5,92,071	..	...	...	2
83,631	29,73,910	3,92,826	4,59,405	2,51,809	2,77,00,618	1,02,196	8,55,809	32,492	...	3
5,87,993	27,00,507	4,98,506	5,41,465	1,91,850	2,71,21,755	1,17,795	8,81,477	48,501	...	4
...	17,41,688	2,15,969	1,31,341	2,73,500	1,10,31,294	34,672	9,69,114	12,073	3,222	5
...	10,38,652	2,51,725	1,57,157	2,42,810	1,66,78,519	40,393	10,28,824	19,932	-1,776	6
83,631	47,88,593	8,09,791	5,59,749	5,29,309	3,00,31,012	1,20,868	15,24,423	45,465	-3,222	7
5,87,993	41,29,159	7,50,234	7,01,625	4,41,690	3,78,03,274	1,58,133	19,10,301	68,433	-1,776	8
6,40,795	9,83,952	4,41,899	1,59,012	3,93,601	1,09,70,471	77,655	7,46,917	47,609	2,404	9
5,27,495	9,15,765	3,52,314	1,59,769	3,99,182	1,11,03,852	85,212	7,37,035	47,607	1,871	10
18,04,260	5,12,921	56,634	42,623	95,519	70,03,847	...	...	...	...	11
15,13,663	5,44,846	59,650	44,929	1,00,757	74,84,892	...	...	...	...	12
20,35,055	14,08,893	4,98,032	2,01,035	4,94,123	1,78,74,318	77,655	7,46,017	47,609	2,404	13
23,41,159	14,60,811	4,51,984	2,03,697	4,99,039	1,85,89,211	95,213	7,37,035	47,607	1,871	14
-19,51,424	32,41,710	1,10,762	8,89,116	34,180	2,16,57,594	...	...	...	...	15
-15,03,165	29,09,548	8,08,270	4,07,928	-58,219	1,02,15,030	...	...	...	...	16
-4-45	20-35	6-03	20-06	1-14	9-82	...	...	...	...	17
-4-00	16-29	16-06	37-35	-1-95	8-00	...	...	...	...	18
-5,57,141	19,89,949	-19,672	2,99,393	-1,43,705	1,57,80,147	24,541	1,09,302	-15,117	-2,404	19
-2,50,502	18,74,743	-1,16,192	8,85,699	-2,04,832	1,00,20,003	22,523	1,44,302	891	-1,871	20
-1-27	12-49	-2-67	22-42	-4-32	7-58	4-15	...	...	..	21
-0-64	11-55	6-39	29-05	-6-55	7-17	3-30	...	...	...	22
-5,57,164	37,54,631	1,07,300	4,80,737	1,20,705	2,85,51,441	59,213	10,77,508	-2,144	518	23
-2,89,102	35,18,891	3,67,020	5,42,858	42,503	2,05,99,422	63,021	11,73,216	20,826	-3,647	24
-1-27	23-56	0-10	32-25	4-35	12-09	10-00	...	...	...	25
-0-64	21-05	20-21	40-75	1-42	11-05	-10-03	...	...	...	26

Major Irrigation Works. WESTERN JUMNA CANAL.

(SUPERINTENDING ENGINEER—MR. G. O. LAURIE.)

1. The Canal received a credit of Rs. 1,224 on account of value of land surrendered and issues of stock to works.

Capital account.
Kharif 1917.
Rabi 1917-18.

2. The expenditure amounted to Rs. 1,42,095 (Imperial Rs. 1,23,060 Contribution Rs. 19,035) and was incurred on numerous small works for increasing the efficiency of the canal.

Extensions and Improvements.

3. Expenditure amounted to Rs. 5,98,762 (Imperial Rs. 5,73,287, Contribution Rs. 25,475).

Maintenance and Repairs.

In addition to this Rs. 24,709 and 19,894 were also spent by the Patiala and Jind States, respectively, on the maintenance of their distributaries.

Apart from ordinary repairs and maintenance of channels and buildings necessary special repairs were done at many places to improve the efficiency of the canal and its channels.

4. (a) *Kharif*.—The monsoon of 1917 was abnormally active commencing early in June and giving good rainfall till the end of September.

Nature of season and state of demand and supply.
Kharif 1917.
Rabi 1917-18.

The cotton crop which was again fairly large after several years of very small area, was badly damaged by rain; further very heavy rain at the end of October completed the damage just when it was hoped that the crop might recover. As against the poor results of the cotton crop the sugarcane crop was excellent both in quality and quantity, and this is a very important crop on this canal.

The highest flood recorded during *Kharif* was 31.0 inches at Ponta on 30th July 1917, against a maximum of 38.5 inches on 14th August 1903, but the river was high throughout the season.

The canal was in flow for 148 days out of 183 days.

(b) *Rabi*.—The very heavy rain at end of October permitted an unusually large area of *barani rabi* sowings, and canal water was a drug in the market. There was, however, practically no rain during the remainder of the season and some of this originally unirrigated crop gradually became canal-irrigated.

The canal remained in flow for 155 days out of 182 days and was closed for 27 days, 21 days of which was owing to the heavy rains in October.

(c) *Rainfall*.—The following table compares the rainfall with the average and shows that the monsoon was a particularly wet one:—

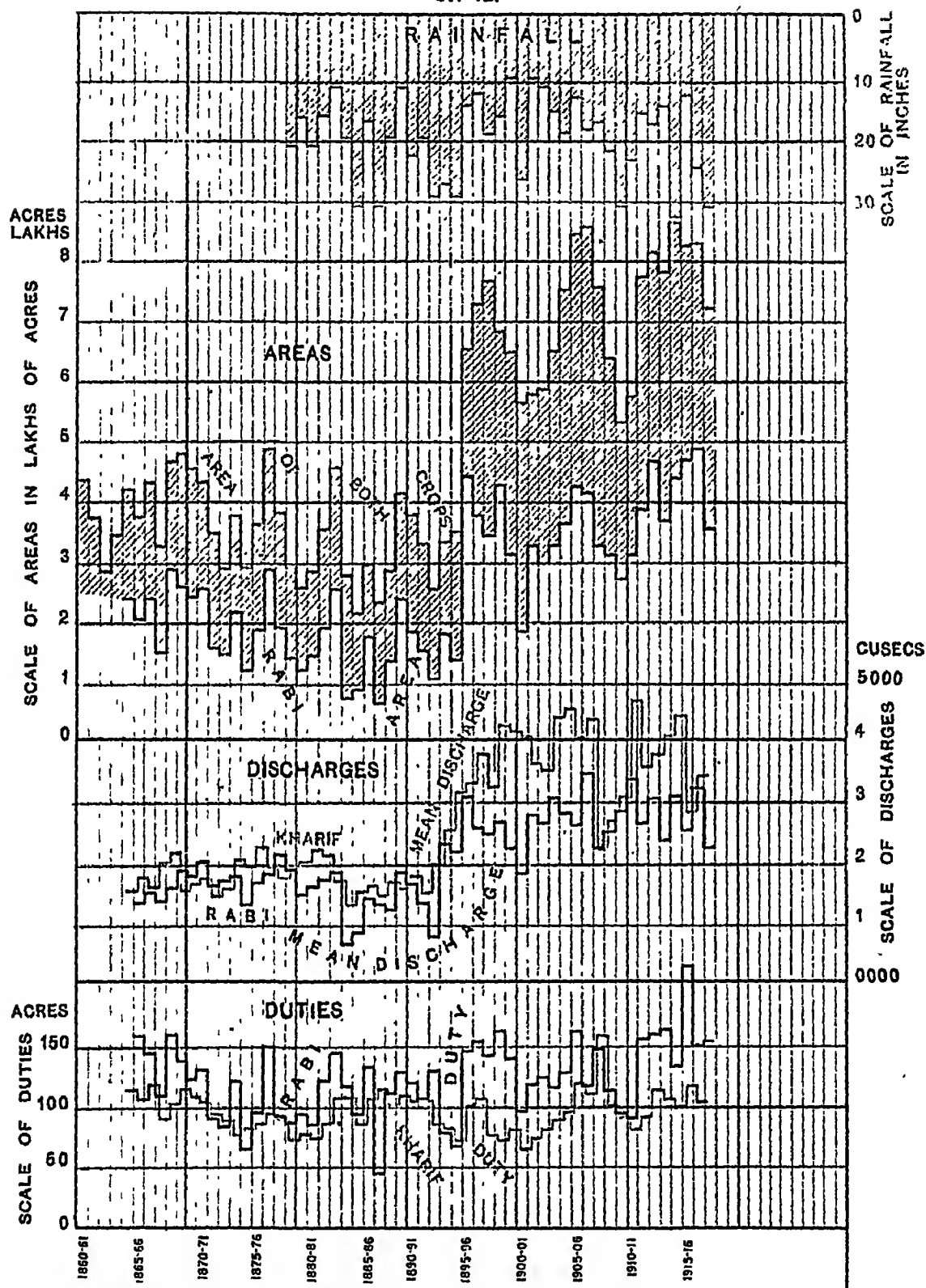
Station.					1917-18.	Average.
					Inches.	Inches.
Ponta	...	...	...	...	98.15	57.9
Tajawala	...	...	...	...	91.2	53.2
Dadupur	...	...	...	...	65.9	41.6
Indri	...	...	...	...	31.3	23.4
Karnal	...	...	...	...	35.2	26.0
Munak	...	...	...	...	31.4	22.0
Delhi	...	...	...	...	32.8	20.2
Rohtak	...	...	...	...	33.2	17.0
Hissar	...	...	...	...	37.5	13.8

The heavy rainfall in the Hissar District is specially noticeable as it did considerable damage to buildings in that District which are not constructed to withstand such heavy rainfall.

WESTERN JUMNA CANAL.

WORKING RECORD.

1917-18.



N. B.—The intercepts in the red area show the Kharif acreage each year.

The areas shown include those done in Patiala State on Sirsa, Branch.

The discharges are as measured at canal head, and are averages utilised for the whole of each crop.

The duties are derived from the above areas and discharges.

Area irrigated,
Kharif 1917.
Rabi 1917-18.

5. The following table compares the irrigation effected with the averages of the two previous trienna :—

Crop.	AVERAGE FOR THE 3 YEARS ENDING		Area irrigated during 1917-18.
	1913-14.	1916-17.	
	Acres.	Acres.	Acres.
Kharif	380,308	882,551	373,102
Rabi	412,007	460,676	352,223
Total ...	792,310	813,127	725,325

The reduced area of irrigation was owing to the exceptionally high results of recent years and to the heavy rainfall during both crops.

6. The receipts amounted to Rs. 52,541 and maintenance charges Rs. 5,644 showing a nominal profit of Rs. 46,897 against Rs. 68,229 in 1916-17 and Rs. 47,113 in 1915-16.

Navigation.

Many thousands of sleepers collected for navigating the canal were washed down the river during the October floods and to this cause is attributable the decrease in navigation receipts.

No boats are now plying for hire on the canal, the only navigation being raft traffic and boats for carriage of Government material and a few boats plying in connection with the Flour Mills on the Main Branch.

7. *Imperial*.—The gross revenue was Rs. 33,13,833 and the working expenses Rs. 13,70,721 giving a net revenue of Rs. 19,43,712 against Rs. 17,47,744, the average of the previous triennium, and Rs. 17,95,729 of the previous year.

Financial results based on collections.
Kharif 1917.
Rabi 1916-17.

The increase was due to an increase in the area irrigated during Rabi 1916-17 the revenue on which was collected during the year. The result would have been still better if the cotton crop had not been damaged by excessive rainfall in the Kharif of 1917.

Contribution.—The net revenue received by the Patiala State on their channels on the Sirsa Branch amounted to Rs. 2,20,460 or 19 per cent. on the capital cost invested against an average of Rs. 1,34,293 or 11.57 per cent. for triennium ending 1916-17 and Rs. 1,20,147 or 10.35 of the previous year.

8. (a) *Agricultural and other conditions of the year*.—The Canal remained in flow for 303 days and was closed for 35 days during kharif and 27 days during rabi, the latter including 21 days after the heavy rainfall in October. No winter canal closures for carrying out urgent works could be obtained owing to the failure of rain in January and February.

General remarks.

The monsoon was unusually heavy and well distributed.

The area remitted amounted to 25,538 acres in kharif and 5,038 acres in rabi, giving a percentage of 6.84 and 1.43 acres, respectively, on the area irrigated, against 4,855 acres for kharif and 1,879 acres in rabi or percentages of 1.39 and 0.39 acres, respectively, remitted last year.

Most of the kharif remissions were on cotton, which suffered from excessive rain late in the season. Cotton prices, however, were so high that the cultivators were to some extent compensated for the comparative failure of the crop.

Owing to the heavy rainfall at end of October practically the whole canal area was placed under crop during the rabi season, though a small percentage of this only eventually became irrigated crop. Owing to the failure of the rain in January and February the zamindars who held off from taking

canal water got only a poor wheat crop, but the large area put down under gram on the Sirsa Branch was very successful without any assistance from the canal.

There was no scarcity of fodder during *kharif*. Very little or no advantage was taken by the *zemindars* of the concession recently granted for levying no water rates on *guara* ploughed in as green manure.

The swampy area along the lower reaches of the main line continues to improve owing to the system of wide silting reaches.

The silted up areas are being gradually brought under cultivation and the area beyond is being cultivated up to the banks of the silting tanks.

The drainages throughout the canal tract worked well notwithstanding the heavy rainfall, and justified the large sums recently spent on putting them in order. These drainages were taken over a few years ago from the District Boards and were then in such a state as not to be able to prevent considerable loss of crops when rainfall was heavy.

The value of crops assessed to water rates amounted to Rs. 4,10,91,712 which shows that the canal is a very valuable asset to the country.

(b) *Nature and scope of contemplated new works and progress made on the preparation of new projects.*—(i) The project for the proposed new Level Crossing at Dadupur is still before the Government of India but is likely to be held in abeyance on account of impossibility of obtaining the iron work at a reasonable rate until after the end of the war.

(ii) There are proposals under consideration for remodelling the head works at Tajawala.

(iii) There is also a project for substituting minors in place of direct water-courses for the main line irrigation.

(iv) The work of redesigning the existing old distributaries according to scientific principles and gradually remodelling them is being carried forward systematically as funds permit.

(v) The construction of a rest-house at Kharak Kalan in Rohtak District has been deferred until the end of war.

(vi) The opening up of the Indri-Singhoa Out so as to separate off escapeage from drainage at Indri was approved, but work had to be postponed on account of stringency of funds.

(c) *Interesting facts relating either internally or externally to the canal.*—(i) The garden areas in and around Delhi continue to be thinned out, thereby causing considerable sanitary improvement enabling the gardens to be worked with a less supply of water.

(ii) Saltpetre manufacture has been revived at numerous places in the canal area owing to the requirements for the war.

(iii) The rainfall received at the end of October caused a flood in the river Jumna on 27th October 1917 which was only $2\frac{1}{2}$ feet less than the absolute maximum at Hathnikund and Tajawala. The lateness of this flood introduced another unusual experience, inasmuch as the sleepers were then being brought down to the river banks for rafting down to Jagadhri Railway Station and very many thousands of these were carried away and brought down by the flood. It is satisfactory that the works at Tajawala withstood without damage the impact of this flood, bearing this mass of sleepers and also carrying many large trees

(iv) The difficulty of obtaining coal owing to the war and the block in railway traffic, has necessitated all brick burning being done with wood fuel which usually had to be obtained from canal plantations.

IRRIGATION IN NATIVE STATES.

Irrigation in Patiala State.—The irrigation in Patiala State from the Sirsa Branch was 40,696 acres in *kharif* and 31,182 in *rabi*, or a total of 74,878 acres, exclusive of 8 acres remitted in *kharif* and 26 acres remitted in *rabi*. The average of the area assessed for the two previous triennia ending 1916-17 and 1913-14 were 71,036 and 70,294 acres, respectively.

Irrigation in Jind State.—The water which the Irrigation Branch undertakes to supply the Jind State is 353 cusecs in order to irrigate an area of 60,000 acres in the year. The irrigation was 59,696 acres; the decrease is attributable to the same causes as the decrease in British Territory. The average area irrigated during the two previous triennia ending 1913-14 and 1916-17 were 63,284 and 62,363 acres respectively.

Besides the area recorded above the Jind State gets an average of about 1,000 acres of irrigation from the Bhiwani Distributary which is assessed at the water rates prescribed for British areas on the Western Jumna Canal. The maintenance and assessment connected with all Jind distributaries are controlled by State officials.

The following table shows the working of the Jind State distributaries as reported by the State :—

Particulars.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
<i>Receipts.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Occupiers' rates ...	2,84,720	2,88,098	2,62,054	2,58,054	2,94,610
Miscellaneous ...	5,360	5,083	5,678	5,300	4,015
Total ...	2,90,080	2,94,081	2,67,732	2,63,354	2,98,625
<i>Working Expenses.</i>					
Establishment ...	7,561	7,817	7,397	10,491	11,340
Other expenses ...	27,258	28,365	31,776	21,676	19,894
Occupiers' rates paid into British Treasury.	1,31,000	1,31,000	1,31,000	1,31,000	1,31,000
Total ...	1,65,819	1,67,182	1,70,173	1,63,167	1,62,234
Profit or loss ...	+1,24,261	+1,26,899	+97,559	+1,00,187	+1,36,391

The above shows a profit of Rs. 1,36,391 against Rs. 1,00,187 in the previous year.

Irrigation in Bikaner State.—It has been agreed to irrigate 460 acres annually in the Bikaner State from the tail of the Hissar Distributary. The areas actually irrigated were 261 acres in *kharif* and 192 acres in *rabi*, or a total of 453 acres.

This area pays the ordinary occupier's rates and is assessed by the Canal Department.

Irrigation in Kalsia State.—The irrigation in Kalsia State from the Main Line of the Canal was 813 acres in *kharif* and 699 acres in *rabi*, or a total of 1,512 acres, exclusive of 30 acres remitted in *kharif* and 62 acres in *rabi*. This area also pays the ordinary occupier's rates and is assessed by the Canal Department. The average area assessed for the last 3 years has been 734 acres in *kharif* and 770 acres in *rabi*, or a total of 1,504 acres.

SIRHIND CANAL.

(SUPERINTENDING ENGINEER—MR. E. R. FOR.)

1. (a) *Imperial*.—The expenditure (direct and indirect) amounted to Rs. 54,624 but was reduced to Rs. 38,567 by a credit of Rs. 16,057 on account of cost of iron work recovered from dismantling the lock channels on Sutlej Navigation Channels. The expenditure was incurred on completing the works started in the previous year including Executive Engineer's quarters at Rupar; foot bridge at Bul R. D. 34,810, Abohar Branch; girder cart bridge at Saholi R. D. 94,250, Abohar Branch; rest-house at Dadahur, Bhatinda branch; dispensary and Sub-Assistant Surgeon's quarters at Dadahur, Bhatinda Branch.

(b) *Contribution*.—The expenditure of Rs. 3,968 represents the share borne by the Signatory States of the expenditure incurred on the headworks and main line.

2. (a) *Imperial*.—The expenditure amounted to Rs. 70,432 against Rs. 1,35,272 in the previous year and was incurred mainly on Slab Lining experiment on the main line at Kiri; raising and widening of bridges on distributaries in the Ferozepore Division and constructing Head of Ferozepore Navigation Channel.

(b) *Contribution*.—Amounted to Rs. 1,30,281 of which Rs. 1,31,055 represents the seigniorage charges.

The difference of Rs. 5,229 partly represents the share of the expenditure on the head works and main line and partly the expenditure incurred on a Telegraph Office with Signaller's quarters at Harrigarh and an office room to Sub-Divisional Officers' quarters and a well at Gujran rest-house.

3. (a) *Imperial*.—The expenditure was Rs. 5,31,468 against Rs. 5,75,541 in the preceding year and was, in addition to the ordinary maintenance of channels, works and buildings, incurred on the special repairs to Sugh torrent training works; repairs to protection works in the Siswan and Budki torrents; clearing Chamkaur escape outfall; metalling ramps and bridges; removing gates and gearing of locks; and berm cutting the Sutlej Navigation Channel.

The specification of the protecting works is of particular interest and the behaviour of this protection whenever tested by severe floods will be watched with equal interest.

It has not been tested yet by any flood worth mentioning.

(b) *Contribution*.—The expenditure was Rs. 2,28,137 against Rs. 2,22,061 in the previous year.

The excess of Rs. 6,376 was caused by the abnormal expenditure on works of special nature done on various parts of the canal in the Patiala Division and the extra repairs in the same Division, necessitated by the rainfall abnormal both in amount and intensity.

4. (a) *Kharif*.—The canal was in flow for 105 days during which the rainfall was exceptionally heavy, being approximately double the normal throughout the canal tract. There was consequently a poor demand for water and the canal was actually closed for 77 days between the 1st April and 30th September. The abnormal and heavy rainfall affected the crops very adversely and the figures of area irrigated went down from 544,774 in the previous year, a dry year, to 375,803 acres in the current year which is the lowest since 1910, the maximum being 557,000 in 1899.

(b) *Rabi*.—The canal was in flow for 118 days. The rainfall was in excess of normal but most of it fell in October and the rest in March. From November to February the weather was exceptionally dry and the river supply was insufficient to meet the keen demand which arose from January to end of the crop. As a result of the heavy rain in October the canal was closed for 21 days in November. This may be considered a unique feature of the year as hitherto it had never been closed at all in this month since it was first opened.

(c) *Rainfall*.—The table below compares the mean rainfall of the year over the irrigated tract in each District with the average mean of 34 years. Both the *kharif* and *rabi* rainfall were very much in excess of the averages of the previous years :—

District.	Crops.	RAINFALL.		Percentage of actual to average of 34 years.
		1917-18.	Average of 34 years.	
Ludhiana ...	<i>Kharif</i> , 1917 ...	39.59	16.55	
	<i>Rabi</i> , 1917-18 ...	7.67	3.97	
	Total ...	47.26	20.52	230 %
Ferozepore ...	<i>Kharif</i> , 1917 ...	27.72	12.06	
	<i>Rabi</i> , 1917-18 ...	5.59	2.26	
	Total ...	33.31	14.32	233 %
Native States	<i>Kharif</i> , 1917 ...	35.28	15.70	
	<i>Rabi</i> , 1917-18 ...	8.65	3.20	
	Total ...	43.93	18.90	232 %

5. The following table shows the irrigation effected during 1917-18, and the averages of the two triennia ending 1913-14 and 1916-17 :—

Area irrigated. <i>Kharif</i> , 1917. <i>Rabi</i> , 1917-18			Average of three years ending 1913-14.	Average of three years ending 1916-17.	1917-18.
Crop.			Acres.	Acres.	Acres.
BRITISH BRANCHES.					
<i>Kharif</i> ...	...	...	317,161	328,177	207,435
<i>Rabi</i> ...	...	...	654,704	550,351	344,299
Total	...	...	971,925	879,028	551,734
NATIVE STATES BRANCHES.					
<i>Kharif</i> ...	...	...	170,044	205,792	168,368
<i>Rabi</i> ...	...	...	330,420	320,376	211,792
Total	...	...	509,464	526,168	380,160
BRITISH AND NATIVE STATES BRANCHES.					
<i>Kharif</i> ...	...	...	490,205	533,969	375,803
<i>Rabi</i> ...	...	...	985,184	871,227	556,091
Total	...	...	1,481,389	1,405,196	931,894

The area irrigated (931,894 acres) is the lowest since 1910-11 when it was 843,476 acres—the maximum being 1,609,458 acres irrigated in 1911-12. The decrease is due to heavy rains.

6. The details of traffic in tonnage and receipts is shown in the table :—
Navigation.

Particulars.	1916-17.	1917-18.
Tonnage carried	24,209	29,218
Value of tonnage	924,557	1,117,813
Toll receipts and raft dues	15,141	10,905
Maintenance charges	3,627	7,553
Number of passengers carried	18,409	16,359

There has been a considerable increase in the maintenance charges and the net return is, therefore, less than in the preceding year in spite of higher toll receipts and raft dues.

7. (a) *British Branches.*—The net revenue earned by the British Branches amounted to Rs. 21,80,527 or 8·51 per cent. on the Capital. The corresponding figures for the previous year were Rs. 29,76,526 or 11·63 per cent. The decrease was due to the shortage in the areas on which collections was made being 753,083 acres as against 936,192 acres in the previous year.

The working expenses were Rs. 12,51,492 which was Rs. 1,32,658 less than in the previous year. The working expenses per acre irrigated was 2·27 against 1·56 in the previous year. This figure of working expenses per acre irrigated is the highest on record, the previous highest being 2·24 in 1893-94, but in that year the Canal was closed for 3 months early in the *kharij* season owing to silt troubles in the Main Line. This figure is hardly likely to recur as the irrigated area was phenomenally low and at the same time heavy maintenance charges on torrent works were incurred.

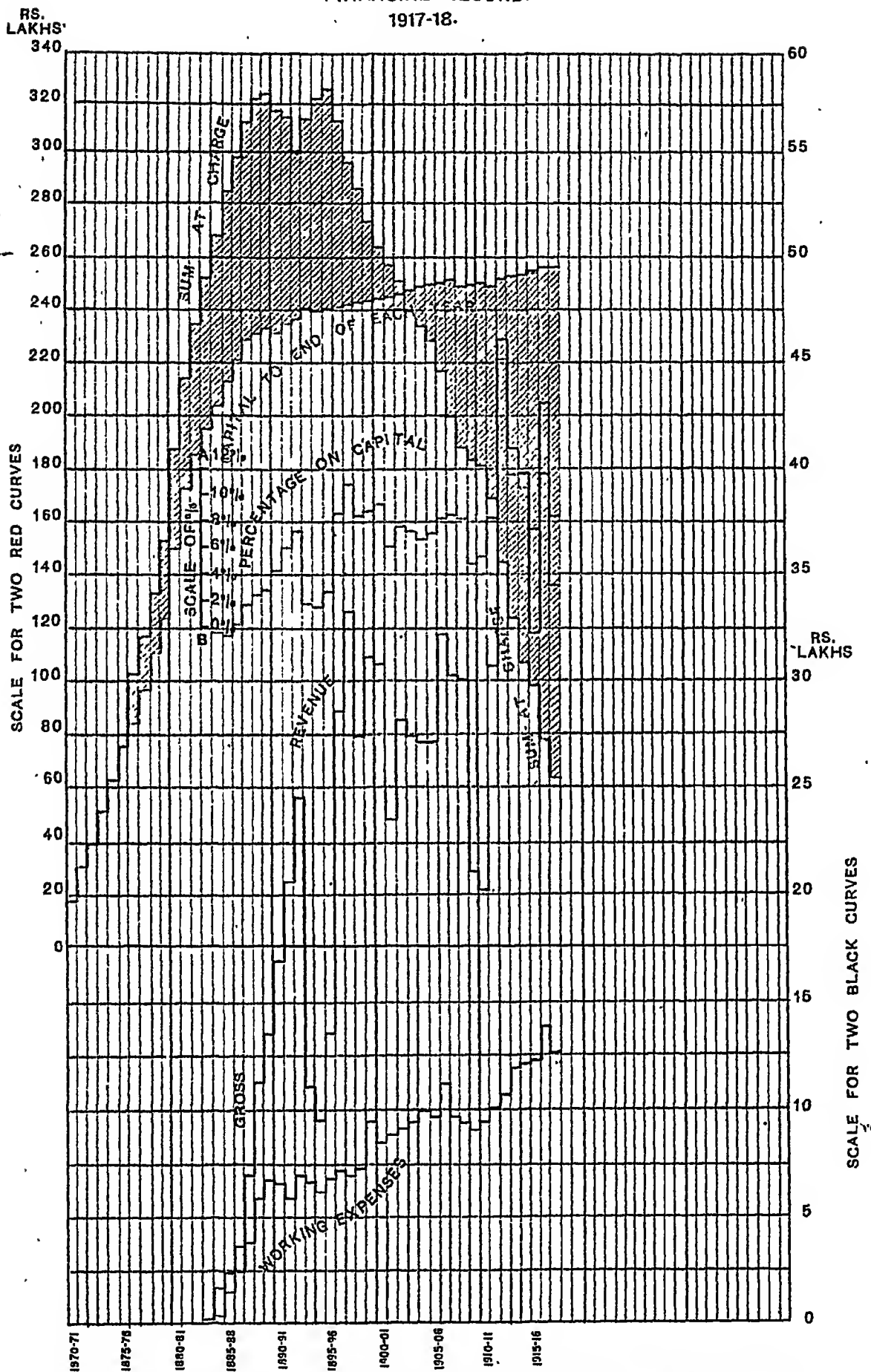
(b) *Native States Branches.*—The following table gives a comparison of the figures for the present and past years in collections, assessments, profits and areas assessed :—

Year.	AMOUNT OF GROSS REVENUE		Area assessed.	PROFIT ON	
	By collection.	By assessment.		Collection.	Assessment.
	Rs.	Rs.	Rs.		
1916-17	25,72,310	24,22,008	5,32,080	11·33	10·33
1917-18	22,61,944	17,15,525	3,70,080	9·20	5·38
More or less	—3,10,366	—7,07,083	—1,58,000	— 5·18	—4·95

"SIRHIND CANAL—BRITISH.

FINANCIAL RECORD.

1917-18.



N. B.—The intercepts in the red area show arrears of interest which, added to the capital, give the sum at charge. Where the two red curves cross all such arrears were wiped off, and there after accumulated profits accrue, as measured by the intercepts in the blue area.

The scheme was begun about 1870 and opened in 1883-84. The lapse from prosperity shown in period 1883 to 1896 was partly due to silt troubles since overcome, and to exceptionally heavy rain.

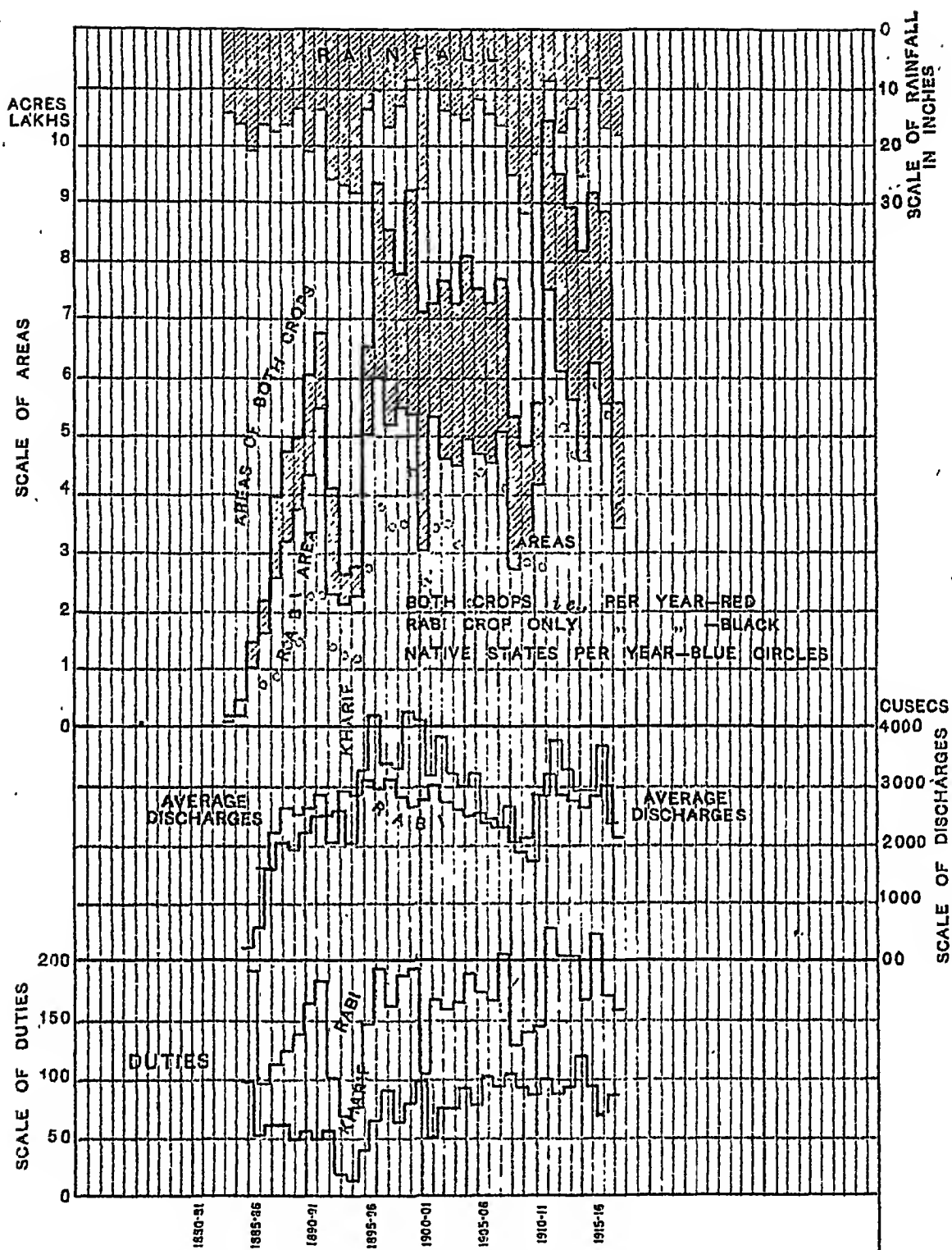
The intercepts between the black curves give the net revenue.

No interest is charged on the arrears of interest, so the sum at charge is somewhat untrue.

SIRHIND CANAL—BRITISH.

WORKING RECORD.

1917-18.



N. B.—The intercepts in the red area give the Kharif acreage each year.

The small areas of 1892 to 1896 were partly due to silt difficulties, but chiefly to heavy rain. The working is more or less unsteady always.

The discharges are measured in main line 26 miles from the head. Of the whole supply 36% goes to Native States, not included here; so that the discharges here shown are only 64% of the actual flow.

These States ought therefore to do areas equal to 3/4ths of those shown above. The actual areas done for both crops are shown for comparison by blue circle, and it will be seen that owing to less efficient management they have done less than half the British, instead of 36/64ths. In winter the whole river is taken in; in Kharif the supply is more than enough, but the demand is then always low.

The profit on collection was lower because of the smaller areas in *kharif* 1917 and *rabi* 1916-17 assessment on which was collected during the year. The decrease in assessment was due to decrease in irrigation.

8. (a) *Projects*.—Estimate for the construction of two distributaries from Bhatinda Branch for Maler Kotla tract has been sanctioned and collection of materials is being arranged for and land plans are in course of preparation.

(b) It has been decided to get out a small project for a *kharif* distributary to utilize to the south-west of the Sutlej navigation channel the small quality of water which now runs to waste in that channel during the *kharif*.

(c) *The Bhakra Dam Project*.—The preparation of the Bhakra Dam Project continued throughout the year. All the Field Surveys and contour plans have been completed and the alignments of the Main Canal, Feeders and Branches laid out and approved.

It is possible now to start on the detailed designs and estimating of the Project the total cost of which it is expected will amount to about twelve crores.

9. *Areas of important crops*.—*Sugarcane*.—Area irrigated 3,516 acres against 1,704 in the previous year.

Cotton.—Area irrigated 14,898 acres against 10,702 in the preceding year. This rise is probably due to market rates being better than in the previous year.

Wheat.—The area under wheat has dropped from 257,582 in 1916-17 to 197,267 in the year under report, but this falling off simply conforms with the general decrease in the whole area of the *rabi* crop. This only applies to canal irrigated wheat. On the other hand there was a large area of *barani* wheat owing to the plentiful rains already referred to.

10. *Agricultural conditions*.—The canal remained in flow for 223 days and was closed for 142 days during the year. The average rainfall recorded was 47.26 inches in the Ludhiana Division and 33.31 inches in the Ferozepore Division against 17.38 and 15.10, respectively, in the previous year. As far as irrigation is concerned the year has been a disappointing one. The area irrigated was abnormally low and the demand for water very poor on account of the abnormal monsoon rain and the rain in October.

The rain of last week of October damaged maize and cotton crops and otherwise did harm, necessitating re-sowing of some areas and delaying unduly the sowing of other areas.

Although the area irrigated was abnormally low yet the area remitted was comparatively large and this was chiefly due to damage by rain and hail.

11. *Interesting facts*.—(a) Discharge observations for determining the rate of absorption in various reaches of the canal have been carried out and interesting results have been obtained.

(b) The daily discharges of the river Sutlej during the monsoon at Bhakra and over Rupar Weir are being recorded and the results obtained are surprisingly concordant and will form a most valuable record.

Similar observations are being recorded by the Project Division at Pange Ferry where the river Beas runs in its last rocky gorge before entering the plains.

UPPER BARI DOAB CANAL.

(SUPERINTENDING ENGINEER—MR. F. W. K. YEOMANN.)

1. The expenditure (direct and indirect) on works excluding suspense Capital account. amounted to Rs. 29,450 against Rs. 1,25,769 in the previous year, and was incurred on installation of Stoney gates in the Madhopur outlet and the Hydro-Electric Scheme, Amritsar.

The sum of Rs. 29,450 includes Rs. 4,717 on account of expenditure in England.

The suspense account showed a credit balance of Rs. 35,760 as compared with the credit balance of Rs. 1,55,923 in the previous year.

2. Expenditure amounted to Rs. 69,860 against Rs. 1,06,841 in the previous year and was chiefly incurred on re-modelling head regulator; head reach, Kashmir Canal; Bugget Drain; constructing Lashkari-Nangal Drain; and on the installation of gates and winches for the Sathiali regulator.

3. Expenditure amounted to Rs. 5,02,573 against Rs. 4,63,600 in 1916-17. In addition to the ordinary maintenance and repairs, expenditure was incurred on—Works in the river Ravi; Shingle clearance from the canal and feeders; and new pitching in canal.

4. The total value of manufactures out-turned from the Central Workshops during the year amounted to Rs. 3,46,694 against Rs. 2,18,124 in the previous year. The percentage charges realized on the value of work done amounted to Rs. 1,26,474 against Rs. 67,500.

The most important work in hand during the year was the remodelling of the Rasul Regulator of the Lower Jhelum Canal. A large portion of the work has been completed and delivered at site. Important works of various descriptions were also done for other Circles and Provinces. Military Works in connection with Mesopotamia have also been in progress—20,000 feet of tramway rails complete and 300 tip waggons have been repaired and supplied. A large variety of articles were also manufactured for the Munition Board

Area irrigated.
Kharif, 1917.
Rabi, 1917-18.

5. The following table compares the area irrigated during the year with the averages of the two previous triennia :—

Crop.				AVERAGE OF 3 YEARS ENDING		AREA IRRIGATED DURING
				1913-14.	1916-17.	1917-18.
				Acres.	Acres	Acres.
Kharif	...	...	...	539,203	529,606	555,771
Rabi	...	...	...	609,957	650,911	585,750
Total				1,149,220	1,180,507	1,144,521

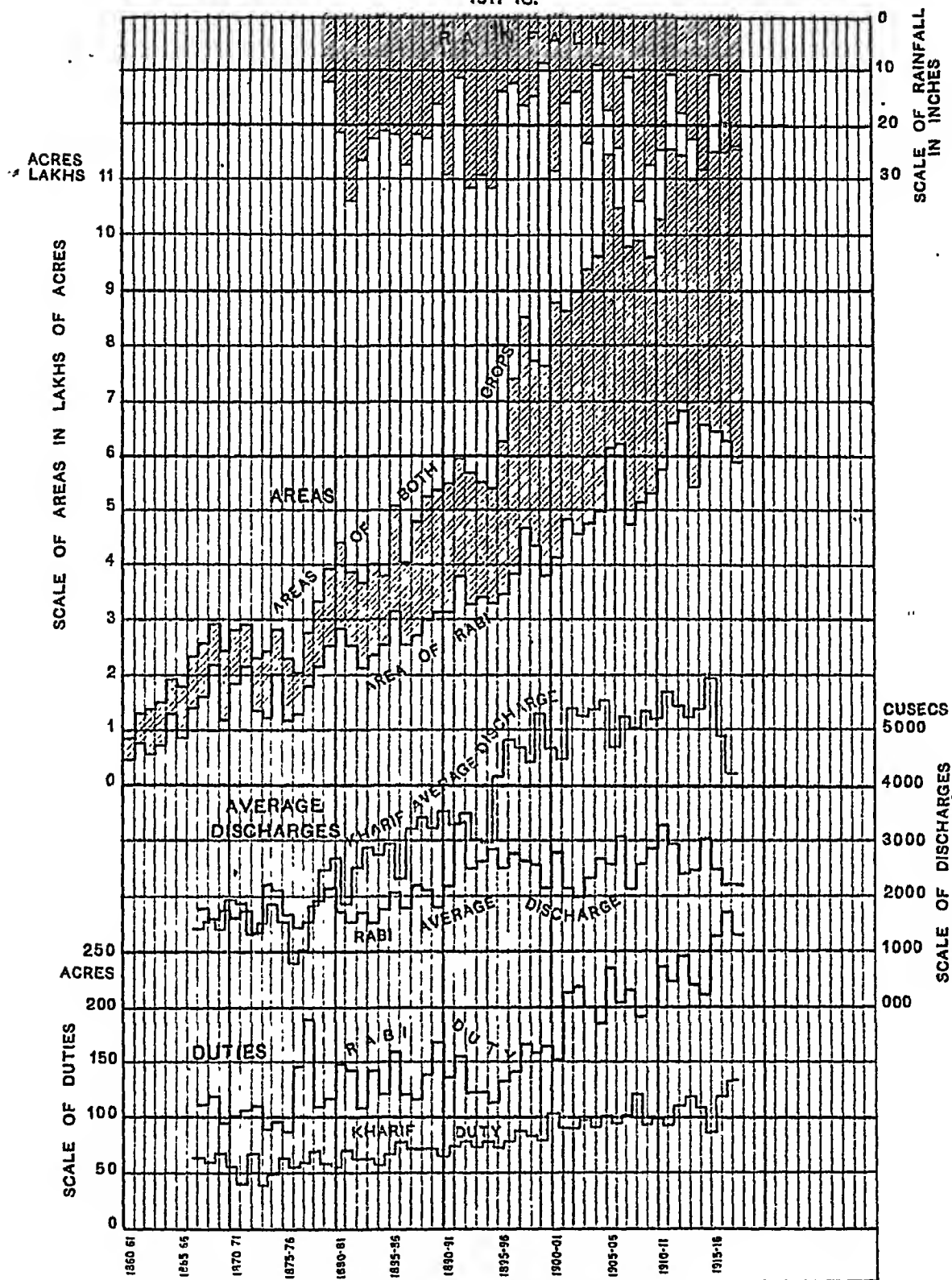
As compared with 1916-17 the area irrigated showed a decrease of 56,776 acres (13,535 acres in *kharif* and 43,241 acres in *rabi*) due to the abnormal monsoon rainfall, which was the heaviest experienced since 1903 and which considerably damaged the crops necessitating very heavy remissions, specially of cotton in the *kharif*, and to the plentiful rainfall in September and October which added large areas to be sown and matured without canal water in the *rabi*; also some of the land wet by rain in October did not dry rapidly enough to permit of *rabi* sowings.

The area for which remissions were granted was 67,237 acres as compared with 29,076 acres in 1916-17, the former was almost entirely due to the exceptionally heavy rain during *kharif* which caused flooding to the crops to the extent of 64,643 acres.

PER BARI DOAB CANAL.

WORKING RECORD.

1917-18.



N. B.—The intercepts in the red area show the Kharif acreage each year.

The discharges are measured at canal head and are averages for each crop.

The duties are derived from these areas and discharges.

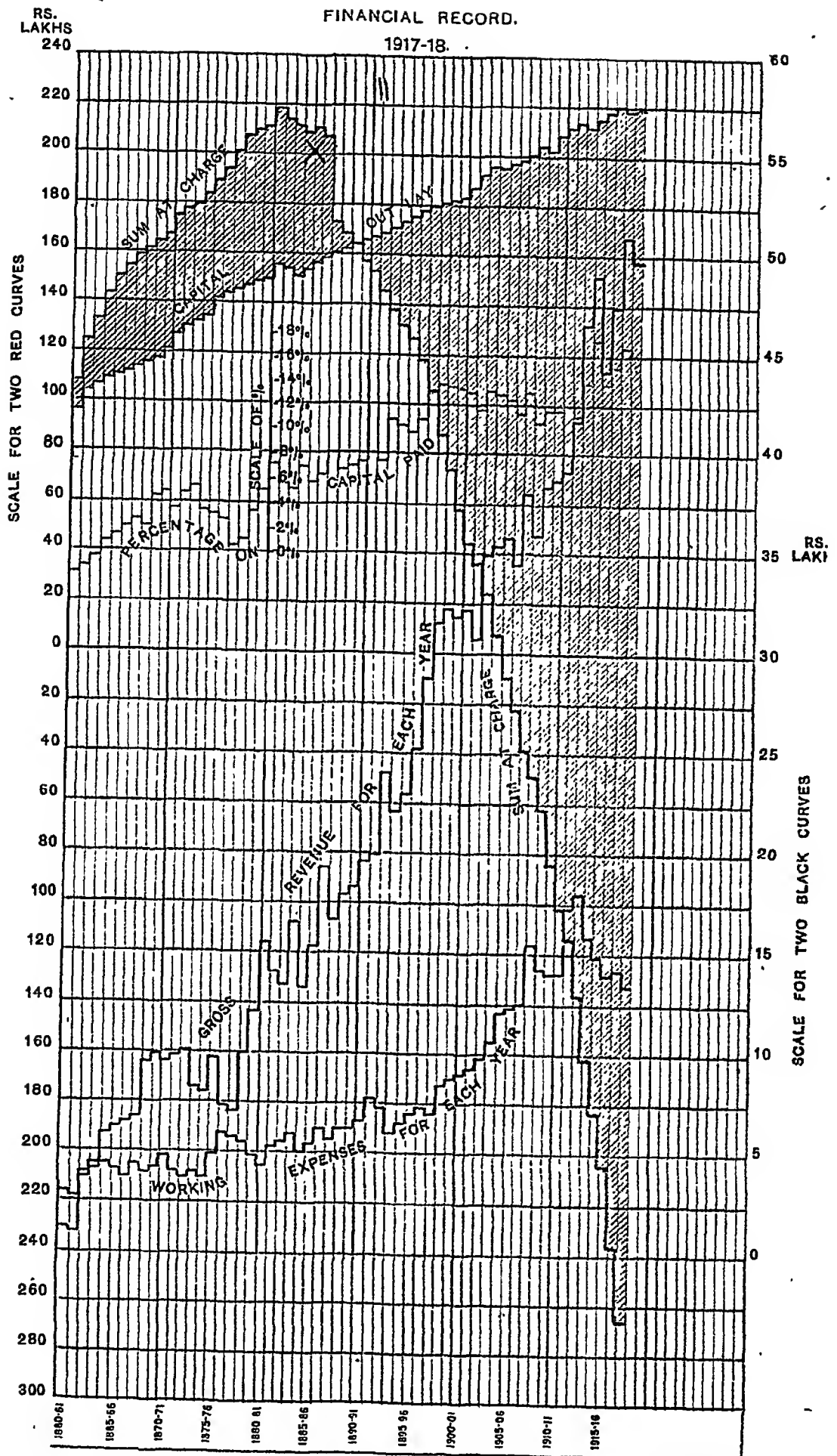
Remarks.—The Kharif duty is fairly uniform and increasing slowly.

The Rabi duty is more irregular, due to variation in demand, but is increasing recently.

The Rabi supply decreased fairly steadily from 1891-92 to 1902-03, but nevertheless the areas increased owing to higher duty.

The Kharif supply has increased since 1894 very considerably, owing to the capacity of the canal being enlarged.

Usually the whole of the river winter supply is taken in for the Rabi crop, but after March and up to September the river supply is in excess of requirements.



N. B.—The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts in the blue area give the accumulated profits. In 1904-05 the whole capital was reimbursed.

No interest is charged for the sums in the red area, so the diagram is rather distorted in this respect.

The intercepts between the black curves give the net income each year.

Remarks.—The sudden drop at X is partly due to a write-back of about 30 lakhs, but was continued by the rapid development of irrigation in the lower reaches of the canal. Up to 1888-89 the canal worked at a loss, since then it has been very profitable.

Nature of season and state of demand and supply.

Kharif, 1917.
Rabi, 1917-18.

6. The mean rainfall is compared with the average of the previous three years in the following table :—

District.				1917-18.		AVERAGE OF PREVIOUS 3 YEARS ENDING 1916-17.	
				<i>Kharif</i> .	<i>Rabi</i> .	<i>Kharif</i> .	<i>Rabi</i> .
				Inches.	Inches.	Inches.	Inches.
Gurdaspur	...	...	...	47.97	11.14	26.76	5.46
Amritsar	...	...	...	30.85	8.76	19.86	4.23
Lahore	...	...	...	31.39	3.96	15.40	3.07

The monsoon of 1917 began as early as 8th April and continued till 26th October on which date the heaviest rainfall of the year occurred. Rain was recorded at Madhopur on 11 days in April, on 5 days in May, on 10 days in June, on 15 days in July, on 19 days in August and on 7 days in September. For the 4 months (June to September) the amount of rainfall measured at Madhopur was 71.15 inches against the maximum of 77.60 inches for the corresponding months of 1894.

The greatest rainfall intensity measured was 5.46 inches per hour at Dhariwal on 12th August. The biggest flood of the year occurred in the Ravi as late as the 27th October when the Mukesar gauge rose to 21 feet.

7. The net income (direct and indirect) amounted to Rs. 36,07,997 equivalent to 16.52 per cent. on the capital invested against 17.35 per cent. of the previous year. The uncollected balance of occupier's rate was Rs. 36,969 against Rs. 15,912 at the end of the previous year.

Financial results based on collections.

Rabi, 1916-17.
Kharif, 1917.

Remissions of water rate amounted to Rs. 3,04,973 against Rs. 97,292. Excessive remissions were due to the heavy rainfall which caused flooding of *kharif* crops, particularly cotton, for which special remissions had to be granted. Liberal remissions were also granted in *rabi* 1916-17 on account of the abnormally dry season.

8. (a) *Duty*.—The average duty secured on the supply utilized was 132 acres in *kharif* and 267 acres in *rabi* as against 117 and 285 acres, respectively, in the previous year.

General remarks.

The canal was closed from 17th April 1917 to 2nd May 1917 when all falls were unwatered and repaired where necessary. There was no other closure except those for a few hours only which were necessary during floods in the river, in order to prevent shingle and timber entering the canal.

(b) *Principal crops*.—The areas matured of the principal crops are compared in the following table with those in the previous year :—

Name of crop.					1916-17.	1917-18.
					Acres.	Acres.
Wheat	..	...	...	...	248,539	203,416
Barley	...	...	...	...	5,375	7,181
Rice	..	...	...	...	80,854	70,054
Maize	...	...	...	...	74,569	49,214
Millets	...	...	...	...	137,379	104,914
Cotton	...	...	...	...	147,021	134,189
Sugarcane	...	...	...	...	42,465	48,154

Considering the special heavy remissions granted for cotton the area under that crop during 1917-18 is not unfavourable as compared with that in 1916-17. In 1915-16 it was 88,290 acres only.

(c) *Agricultural conditions*.—The year under report was unfavourable for agricultural operations. The heavy monsoon rainfall which extended to October did considerable damage particularly to cotton. Large areas of land in the Amritsar and Lahore Districts were flooded causing serious damage to crops, homesteads and the health of the people. The *rabi* crop was handicapped at its start since large areas of land did not dry in time for the *rabi* crops to be sown, and owing to prevailing sickness agricultural labour was very scarce.

During the *rabi* zamindars were offered special inducements to increase the area under food grains, viz., special water rates and facilities for temporary cultivation, but owing to the unfavourable seasonal conditions these inducements were ineffective and the total area irrigated during the crop was considerably less than during the previous *rabi*.

(d) *Contemplated new works*.—(1) The two experimental Radial Arm gates covering bays 20-23 of the inlet at Madhopur, have worked very satisfactorily and an estimate for fitting the whole inlet with similar gates will now be prepared. The work will, however, have to be carried out in more normal times.

(2) In order to bring members of the Criminal Settlement nearer their work in the Dhariwal Mills a foot bridge is to be erected over the Main Branch Upper.

LOWER BARI DOAB CANAL.

(SUPERINTENDING ENGINEER—MR. R. CANNEL.)

1. The Project Estimate was closed on the 31st March 1917 with a total expenditure of Rs. 2,18,74,263 against the Revised Project Estimate of Rs. 2,20,28,402.

Capital account.
Kharif, 1917.
Rabi, 1918.

From the 1st of April 1917 all expenditure was debited to open Capital and during the year this expenditure (direct and indirect) amounted to Rs. 5,87,287. It was spent principally on the following works:—

(a) *Head Works*.—Silting scheme to reclaim the low-lying land near the Headworks of the Canal at Balloki.

(b) *Buildings*.—Two first class and one second class rest-houses; subdivisional staff quarters at Okara; patwarkhanas in the whole canal; subordinates' quarters and permanent telegraph offices; and signallers' quarters in the whole circle.

(c) *Distributaries*.—First 11 miles of 8-R. (Tulamba) distributary and its Minors 2-L and 3-L; 8-A. R. (Karam Ali) Distributary with all its masonry works except the head regulator and gates and gearings which have not yet been supplied by the Central Workshops, Amritsar; 2-L (Kalasan) Distributary and most of the works connected with it and 2-L-10-R. (Chak Shahana) Distributary.

(d) *Watercourses* were constructed, and in some cases completed, in those parts of 8-A R (Karam Ali), 8-R (Tulamba), and 2-L (Kalasan) distributaries which were allotted and which were likely to be irrigated soon.

During the year Rs. 77,940 were spent on watercourse construction bringing the total expenditure to date to Rs. 12,24,576. A separate account is kept for this expenditure which is now debited to the Capital Account of the Canal and which will be recovered from the cultivators by means of an additional charge of 8 annas per acre on the area of matured crops irrigated by the canal, the additional rate being in force till the whole sum expended has been recovered.

2. *Contribution Works.*—The construction of the Hussainabad distributary system (1-L) as a lift irrigation scheme was completed during the year. It irrigates 23,000 acres of land leased to Rai Bahadur Ganga Ram, O.I.E., M.V.O., for six crops on certain terms. He has to lift the water about 6 feet by means of steam pumps. The work is a "Contribution" Work, the cost of the distributary being recovered from the lessee. The remaining area of about 70,000 acres of land lying between the limits of irrigation from Upper and Lower Bari Doab Canals was surveyed and levelled over and a scheme was prepared for lifting water about 16 feet for the irrigation of the area north of the Wan Radha Ram Drainage. The area south of it is likely to be irrigated from small extensions of the Upper Bari Doab Canal.

3. The expenditure of Rs. 46,321 covered roads on Headworks; building of approach roads; making outlets for
Extensions and improvements. avenues; new plantations; alterations to and extensions of irrigation channels; and a discharge flume just below the head regulator of the canal.

4. The expenditure amounting to Rs. 401,572 was incurred on ordinary maintenance of channels, masonry
Maintenance and repairs. works, buildings and plantations. The staunching and consolidating new banks, repainting iron work at Balloki and reinforcing stone apron to left upstream Guide Bank were also carried out.

5. The canal was in flow for 323 days during the year, viz., 157 days during *khariif* and 166 days during *rabi* against 343 days in the previous year.
Nature of season and state of demand during *khariif* and 166 days during *rabi* against
and supply. 343 days in the previous year.
Khariif, 1917.
Rabi, 1917-18.

The demand for canal water was slack in *khariif* season especially during August and September when heavy rain fell, but very keen in the *rabi* season owing to scanty rainfall.

In the winter the supply in the Ravi was sufficient to give the Sidhnai Canal its indent and to supplement the shortage received from the Upper Chenab Canal on occasions.

The abundant rainfall caused the maximum recorded flood in the River, and subsequently a fairly good cold weather river supply. Very heavy falls of rain beat down and damaged the cotton and certain millets in September 1917

Rainfall was abnormally heavy during *khariif* but scanty during *rabi*. The actual average fall given below compared with the average of the previous year :—

		1917-18	1916-17.
		<i>Inches.</i>	<i>Inches.</i>
Lahore	...	38.86	18.42
Montgomery	...	30.08	12.90
Multan	...	18.76	5.48

6. The following table compares the area irrigated each year since the commencement of irrigation on this Canal with the annual estimated area as per Project Estimate :—
Areas irrigated.
Khariif, 1917.
Rabi, 1917-18.

Years.	<i>Khariif.</i>	<i>Rabi.</i>	Amount.	As estimated in the Project Estimate. (annual).
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
1913-14	19,996	53,582	73,578	...
1914-15	106,302	82,902	189,204	250,000
1915-16	114,974	168,320	283,294	450,000
1916-17	248,443	266,493	514,936	650,000
1917-18	296,526	325,074	621,600	871,808

Details of irrigation in 1917-18 by old and new villages in each Division is given below :—

Division.	Old.	New.	Total.
	Acres.	Acres.	Acres.
Balloki ...	46,156	62,716	108,872
Okara ...	28,638	191,412	215,050
Montgomery ...	7,883	179,147	187,030
Khannawal ...	9,550	101,698	110,648
Total	87,227	534,973	621,600

The progress of canal irrigation is a year behind that of the Project Estimate owing chiefly to the Upper Jhelum Canal having started irrigation a year later than had been anticipated and to the backwardness of colonization.

7. The gross receipts (direct and indirect) amounted to Rs. 16,43,347, the working expenses to Rs. 9,13,857, and the net revenue to Rs. 7,29,490. The receipts are 6·8 lakhs more than last year though greatly reduced on account of remissions and backwardness of colonization.

Financial results based on collection.
Kharif, 1917.
Rabi, 1916-17.

The great increase in the Working Expenses is due to the closure of the Project Estimate. Expenditure on "49—Capital" has decreased, that on "42—Major Works—Working Expenses" increased, and a greater proportion of Establishment charges is now debited to the latter head.

8. (a) *Duty*.—The duties on areas irrigated per cusec of average supply measured at canal head and at average distributary heads, respectively, compare as follow with those of the previous year :—

General remarks.

Year.	KHARIF DUTY.		RABI DUTY.	
	At canal head less escapege.	At distributary heads (average).	At canal head less escapege.	At distributary head (average).
1916-17 ...	80	102	130	187
1917-18 ..	87	107	105	136

The *kharif* duties are good for a new canal, but the *rabi* duties are poor, and lower than in the previous year owing chiefly to a more abundant winter water supply.

(b) *Remissions*.—The area remitted was 200,526 acres (122,299 in *kharif* and 78,227 acres in *rabi*) mainly due to—

(1) "Free" crop remissions under tenancy rules, and

(2) Failures.

(1) Amounted to 97,582 acres and requires no explanation. As to (2), the chief causes of remissions during *kharif* 1917 were heavy rain, inferior soil, and bad tilth, the principal crops affected being rice, cotton, sugarcane, maize, *jowar*, and *chari*. In *rabi* 1917-18 the chief causes of failures were inferior soil, bad tilth and hail, and the principal crops affected were wheat, barley, gram, toria, and senji.

(c) *Progress of colonization*.—The following table gives the total culturable crown waste (allotable) area on the canal and the areas allotted permanently and temporarily at the beginning and end of the year. Permanent grants have not increased much, but there has been a boon in temporary grants which now comprise about half the total area allotted.

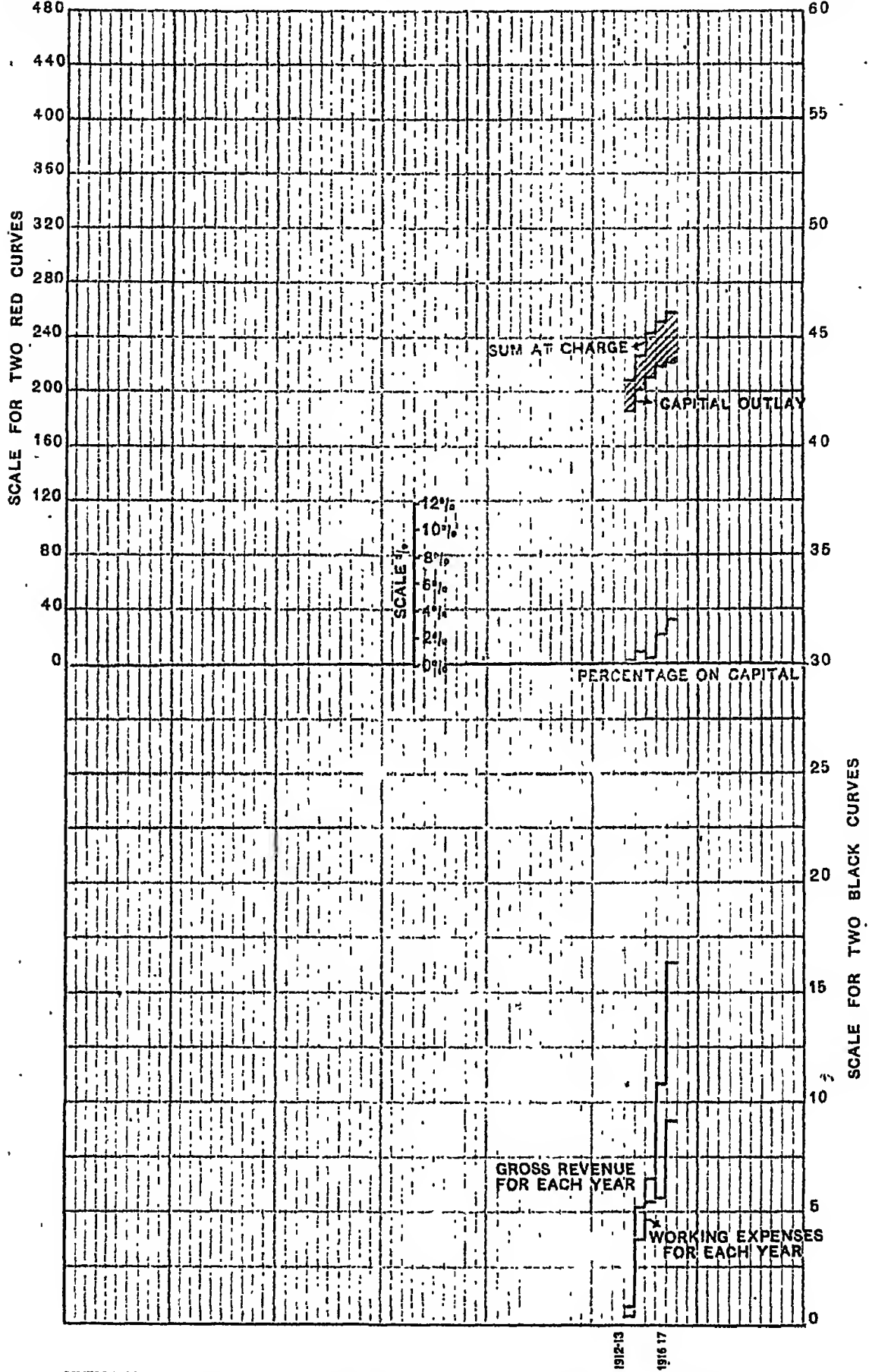
LOWER BARI DOAB CANAL.

FINANCIAL RECORD.

1917-18.

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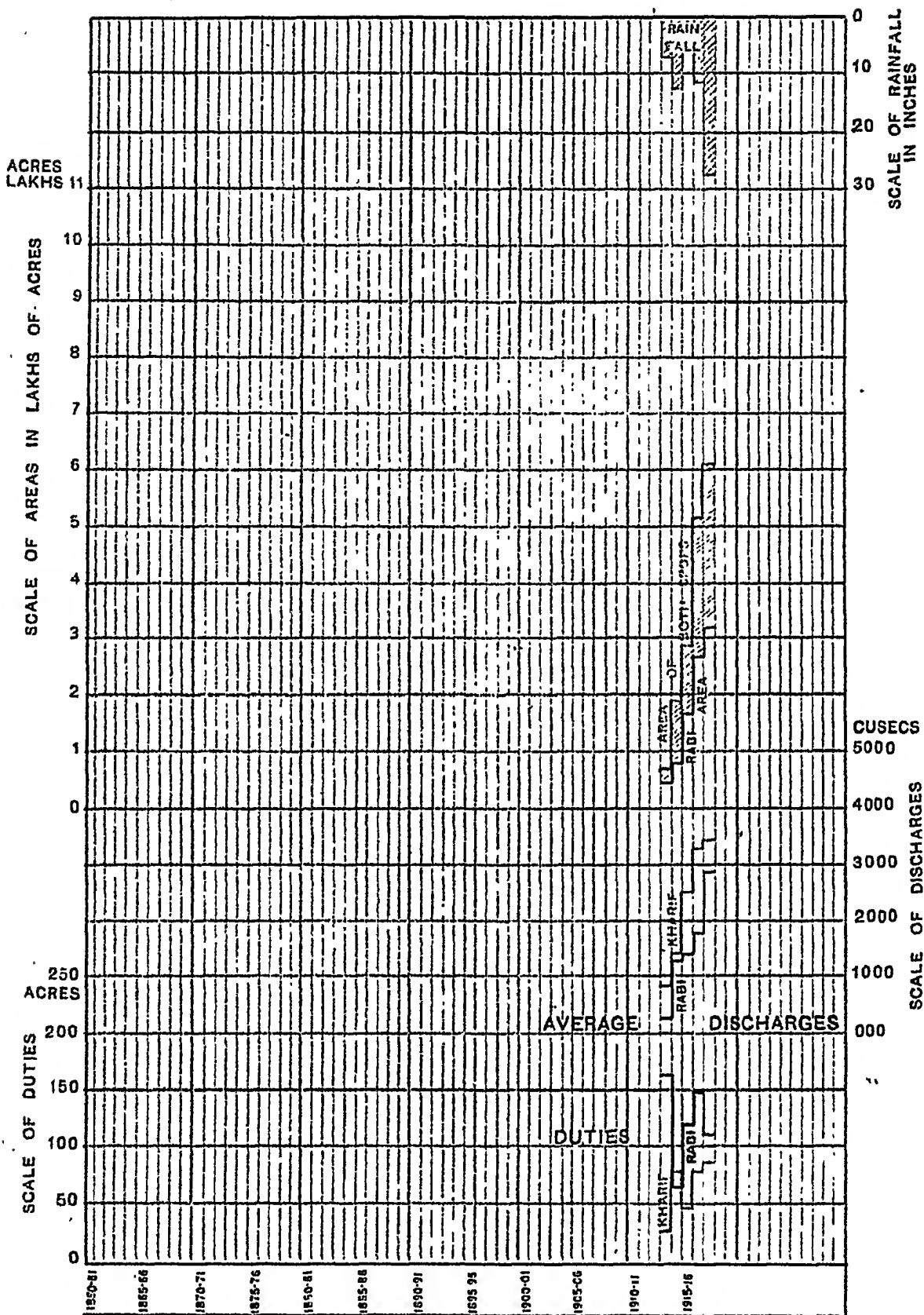
N. B.—The intercepts in the red area show arrears of interest unpaid up to end of each year, which being added to the capital give sum at charge.

The intercepts between the black curves give the net income each year.

LOWER BARI DOAB CANAL.

WORKING RECORD.

1917-18.



N. B.—The intercepts in the red area show the Kharif acreage each year.

The discharges are measured at canal head and are averages for each crop.

The duties are derived from these areas and discharges.

Proprietary areas possess good soil and are being fully irrigated and cultivated.

Total culturable Crown waste area allotable according to Mr. Joseph's classification.	Area allotted to end of 31st March 1917 permanent and temporary.	AREA ALLOTTED TO END OF 1917-18.		
		Permanent.	Temporary.	Total.
Aores.	Aores.	Aores.	Aores.	Aores.
1,016,972	656,894	417,624	400,088	817,662

Great assistance to the working of channels was afforded by the large increase in temporary allotments, but more needs to be done in this direction.

The value of land is high, the highest price paid in March 1918, at auction, being Rs. 615 an acre near Kalasan. Large areas were put under American cotton which is booming at present, sales were excellent, Rs. 18 to Rs. 20 per maund being obtained ordinarily for *kappas*, the highest price obtained being Rs. 22.

(d) *Adjustment of Divisional boundaries.*—The Divisional boundaries were readjusted during the year.

Balloki Division was increased in order to give it a full revenue Sub-Division and lighten the Okara Division, which was increasing by extensions.

The Okara and Montgomery Divisions were equalized and made more compact.

The Khanewal Division was reduced in size in order to admit of more supervision on constructing two new distributaries in the Tulamba Tahsil of the Multan Division.

Canal Administration ran smoothly and in harmony with the colony staff. The water-supply was abundant during both crops and complaints were few.

UPPER CHENAB CANAL.

(SUPERINTENDING ENGINEER—MR. N. WHITE.)

1. The expenditure (direct and indirect) amounted to Rs. 4,33,422 and was incurred mainly on the construction of minor channels of the Raya and Nokhar Branches; and telegraph offices, gauge-readers quarters and irrigation outlets.
Capital Account.
Kharif, 1917.
Rabi, 1917-18.
2. The expenditure Rs. 11,325 was incurred on minor masonry works designed to improve and facilitate irrigation.
Extension and improvements.
3. The expenditure Rs. 5,43,107 exceeded last year's figure by about Rs. 16 per cent. This increase was due to damage to river works caused by a record flood, the abnormally heavy rains of 1917, and the general rise in labour rates.
Maintenance and repairs.
4. The *kharif* season was an exceptionally wet one; the rains commenced early in June, were light during June and July, heavy in August and September and finished up with a heavy downpour at the end of October, it was distributed throughout the hot weather and the demands for canal water was consequently slack.
Nature of season, and state of demand and supply.
Kharif, 1917.
Rabi, 1917-18.

The *rabi* season was again a dry one; excepting a few light showers and hailstorms at the end of March the winter rains were a failure. The demand was, therefore, very keen throughout, rotational closures in turn with the other four canals were enforced as usual, and the supply, on the whole, was adequate and sufficient, when needed, to give a second watering to crops on *kharif* channels, opened as a special measure to increase output of food crops.

The rainfall statistics are given below and compared with the previous years :—

Season.				Sialkot.	Gujranwala.
				Inches.	Inches.
<i>Kharif</i> , 1917	...	...	...	48.0	32.3
<i>Rabi</i> , 1917-18	...	...	...	7.3	2.9
Total 1917-18	...	...	...	50.3	35.2
Total 1916-17	...	...	...	30.3	25.6
Total 1915-16	...	...	...	11.3	5.1
Total 1914-15	...	...	...	32.7	25.1

Areas irrigated.

Kharif, 1917.
Rabi, 1917-18.

5. The following table gives the irrigated areas and a comparison with previous years and the Project Forecast : —

Years.				<i>Kharif</i> .	<i>Rabi</i> .	Total.	As estimated in the Project Estimate.
				Acres.	Acres.	Acres.	Acres.
1913-14	...	...	...	123,882	40,228	164,110	200,000
1914-15	...	...	...	121,189	90,693	211,882	350,000
1915-16	...	...	...	159,152	165,910	325,062	500,000
1916-17	...	...	...	285,917	151,500	437,417	648,367
1917-18	...	...	...	245,110	137,825	382,935	648,367

The total area irrigated consists of 356,208 acres in old proprietary villages and 26,727 acres in colony villages.

Both crops show a falling off ; this is chiefly due to the abundant rainfall. The heavy rain in September and October met the usual demand for canal water to mature the *kharif* crops and enabled large areas of *rabi* crops, especially gram, to be sown and matured without assistance from the canal. The steps taken to rigidly exclude all well lands from canal irrigation also adversely affected the irrigated area.

The development of irrigation has not been so rapid as was anticipated in the Project Forecast mainly due to a shortage in the *rabi* irrigation—up to 1915-16 the *rabi* irrigation on this canal represented only the area to which first and last waterings were given owing to the unforeseen delay in the completion of the Upper Jhelum Canal. The Upper Jhelum Canal was opened in December 1915, but was unable to carry the full supply intended in 1916-17, and this combined with the entire failure of winter rains and the consequent low supply in the river resulted in a further drop in the *rabi* irrigation rather than effecting an improvement in it. The year 1917-18 was also not favourable for canal irrigation on this canal as explained above.

6. The net revenue (direct and indirect) amounted to Rs. 12,58,456 or 8.52 per cent. on the capital outlay to the end of the year (Rs. 3,57,75,607). The Upper Chenab

Financial results based on collections.
Kharif, 1917.
Rabi, 1916-17.

Lower Bari Doab Canal and one-third of the irrigable area is irrigated during *kharif* only ; its commanded area is intersected by numerous hill streams

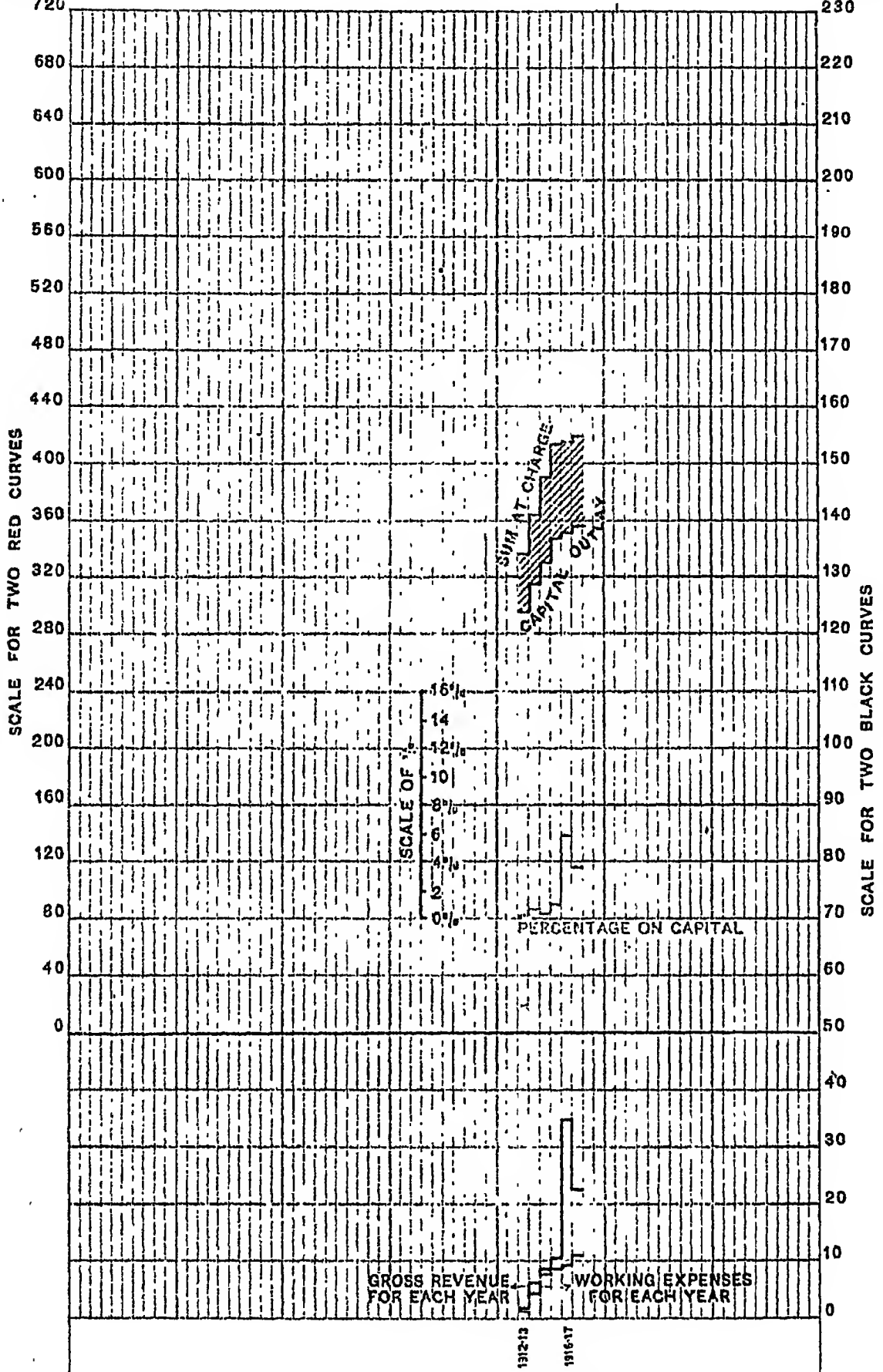
UPPER CHENAB CANAL.

FINANCIAL RECORD.

1917-18.

RS.
LAKHS

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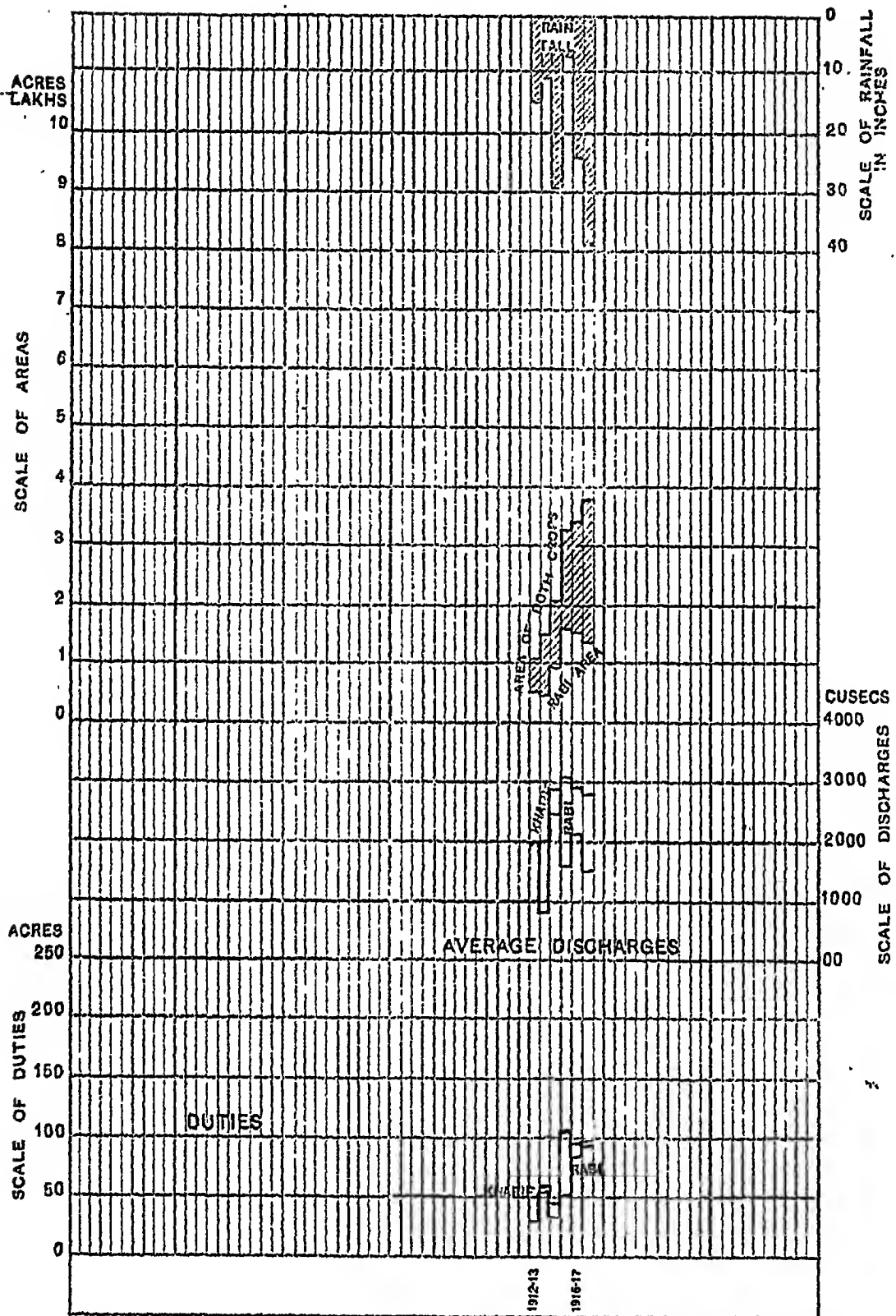
N. B.—The intercepts in the red area show arrears of interest which, added to the capital, give the sum at charge.

The intercepts between the black curves give the net income each year.

Construction commenced in 1905 and the canal was opened in 1912.

UPPER CHENAB CANAL.

WORKING RECORD,
1917-18.



N. B.—The intercepts in red area give the Kharif irrigation each year. The discharge are measured at Meral the head of canal and give averages for each crop.
The duties are derived from these areas and discharges.

which, when in flood, compete with the canal as a means of irrigation; thereby increasing the incidence in cost of upkeep per unit of acre and impairing the financial result of the Project.

7. The highest flood recorded in the Chenab river, since the construction of the canal, occurred on September 24th; the River works stood the test and no serious damage occurred.

General remarks.

The Deg diversion channel continued to work satisfactorily and now diverts the Deg Nallah floods into the Ravi river without any appreciable damage to the country.

The question of seepage in the upper reaches of the canal has received careful consideration; surveys have been carried out and schemes are in hand to check the evil of water-logging.

The complicated zonal system, which fixes various percentages of irrigation for various tracts was discussed at a conference convened by the Financial Commissioners and the proposals arrived at, when put into force, will facilitate irrigation throughout the canal tract.

LOWER CHENAB CANAL.

(SUPERINTENDING ENGINEER—MR. F. T. BATES.)

1. The expenditure (direct and indirect) amounts to Rs. 1,63,553, bringing the total outlay to date to Rs. 3,25,18,571, and was incurred mainly on:—

Capital account.
Kharif, 1917.
Rabi, 1917-18.

Raising the crest of the Khanki Weir.—This may be briefly described as intended to secure greater control of the river, greater power of scouring silt through the sluices and preventing shoaling at canal head.

Constructing main and subsidiary revetment upstream of the Palkhu Spur at Khanki.—By cutting through the Palkhu Spur, this work aimed at providing a "regime channel" on the left bank of the river leading direct to the canal head. This channel was designed with the object of safeguarding against a recurrence of the events of 1910, when the river channel leading to the canal head shoaled up entirely cutting off supply to the canal head and sluices and also blocking up Bays 1 and 2 of the Weir.

Extending irrigation to the right bank of the Deg Nulla.—Secures to the barani and sailaba villages on the Deg Nulla the benefits of perennial canal irrigation. The nulla having been closed off by the alignment of the Upper Chenab Canal in this tract.

Fitting distributary channels with Kennedy gauge outlets.—In order to secure efficiency in the very difficult task of maintaining a fair and even distribution of water from head to tail of distributaries.

Constructing a regulator in the Jhang Branch Upper above Kot Khudayar.—This work aimed at ensuring to certain high level distributaries their fair share of water supply at times when the canal might be flowing with less than its full supply.

2. The expenditure amounted to Rs. 2,61,020 somewhat less than half of the sum spent last year and was mainly incurred on:—

Extensions and improvements.

The River Right bank defence spurs.—These were a series of defence works intended to prevent the river from eroding its right bank.

An inlet on the Main Line.—Insufficient waterway had been allowed at an existing drainage inlet which was destroyed by a flood and had to be replaced by a larger structure.

Refitting the Shahkot-Distributary with Gibb's Patent Modules.—The Civil Department has in view an experiment in fixed assessment and to enable this experiment to be carried out the Shahkote distributary has been fitted with Gibb's patent modules of design; it having been previously fitted with Gibb's modules of an earlier design which failed to fulfil their purpose.

Seepage drains.—Expenditure on these is liable to increase in the near future (*pari passu* with the rise of the surface of the sub-soil water table in certain localities), in order to safeguard the health of the local inhabitants and to prevent the deterioration of agricultural land by water-logging.

In the Hafizabad Tahsil the area in which the water table lay within 3 feet of the natural surface was, in 1905, only two square miles. In 1911 it increased to seven square miles and in 1917 extended over three hundred square miles. These figures show a rapid development of the evil, several surface seepage drains have been constructed on which over three and quarter lakhs of rupees have already been spent. Arrangements are in hand for deepening and improving these to act as seepage drains, and for a comprehensive scheme of seepage drains aiming at the maintenance of the sub-soil water table at a suitably low level, that is to say, at a level at least 4 feet below ground surface; as experience indicates that to be necessary for good sanitation and agriculture. Over an area of 300 square miles the subsoil water is already within 4 feet of the ground surface in years of abnormal rainfall, whilst over 600 square miles it is not more than 5 feet below ground surface.

The remodelling of distributaries in order to improve their irrigating efficiency is a work of the highest importance which it is necessary to carry on notwithstanding considerations of economy inculcated by conditions resulting from the present war, because the Punjab canals, by increasing revenue and the production of food, are powerful auxiliaries to our national aims in the prosecution of the war.

Maintenance and repairs,

3. Expenditure amounted to Rs. 8,85,954, about the same as last year.

Special works include repairs to the Khanki Weir talus, the renewal of Railway sidings and the construction and working of silting tanks on the branch canals to afford them greater immunity from breaching.

(a) The *kharif* season was excessively wet and demand was seldom keen. The late rains gave a great impetus to *rabi* sowings and as the rainfall in the *rabi* months was in defect the demand was strong throughout. It was, however, sufficiently met, as the programme of rotational runnings of the linked canals was worked on methods which secured to each canal system a definite period of full supply sufficient to work all channels efficiently. The river supplies too were more favourable than was the case last year.

Nature of season and state of demand and supply.

Kharif, 1917.

Rabi, 1917-18.

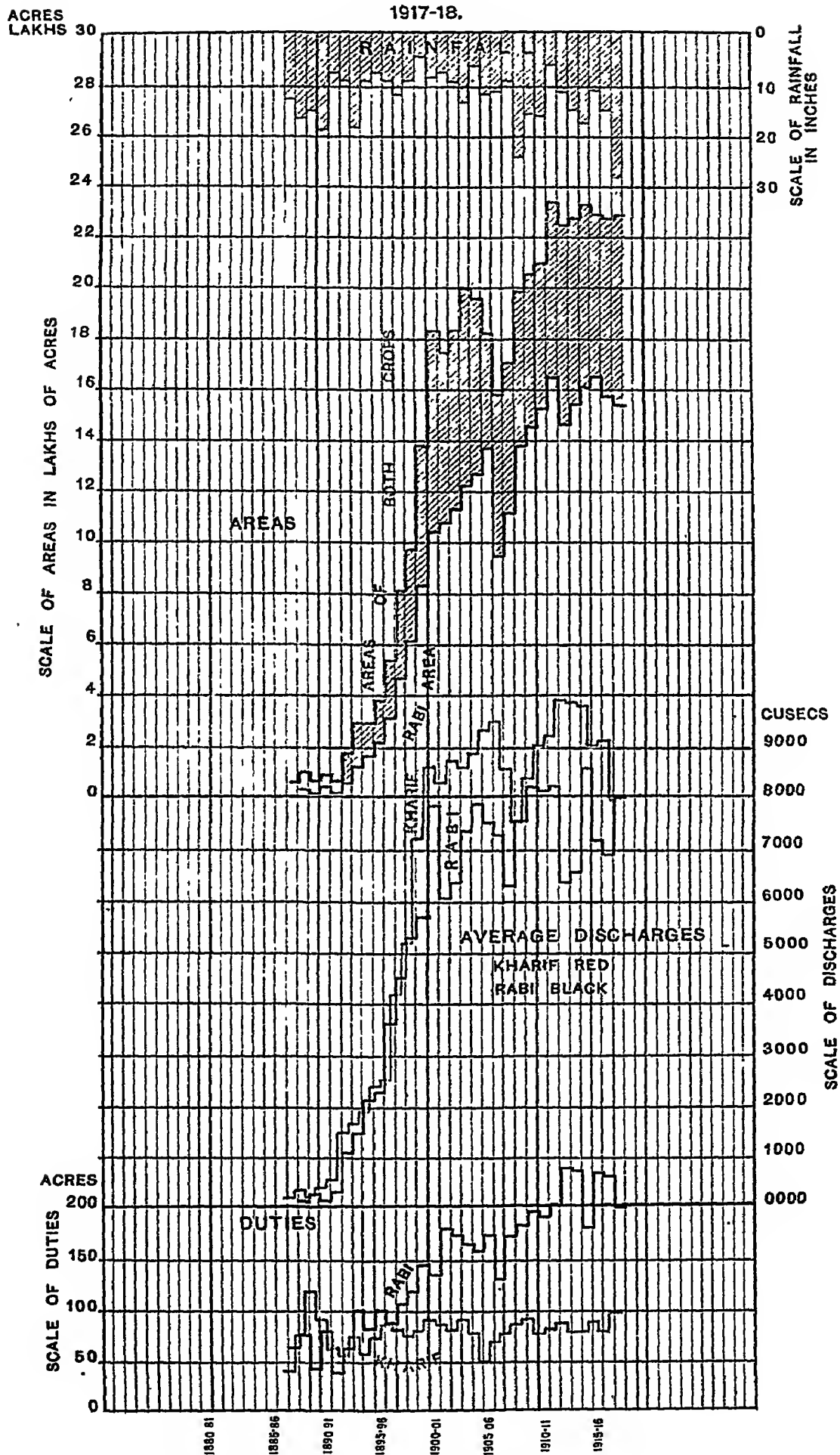
(b) **Rainfall.**—The following table compares the rain fall of the year under review with that of the previous three years:—

Mean for	Lyallpur District.	Jhang District.	Gujranwala District.	REMARKS.
	Inches.	Inches.	Inches.	
<i>Kharif</i> , 1917 ...	24.09	25.12	29.31	For the year 1917-18 the <i>kharif</i> rainfall was in excess of requirements and did some harm, whereas in the <i>rabi</i> it was, on the whole, in defect.
<i>Rabi</i> , 1917-18 ...	0.01	0.01	0.26	
Total for year ...	24.10	25.13	29.57	
1916-17 ...	12.44	9.02	21.01	
1915-16 ...	2.28	2.92	5.15	
1914-15 ...	18.83	13.39	20.73	

LOWER CHENAB CANAL.

WORKING RECORD.

1917-18.



N. B.—The intercepts in the red area show the Kharif acreage each year.

The discharges are measured at canal head and give averages for each crop.

The duties are derived from these areas and discharges.

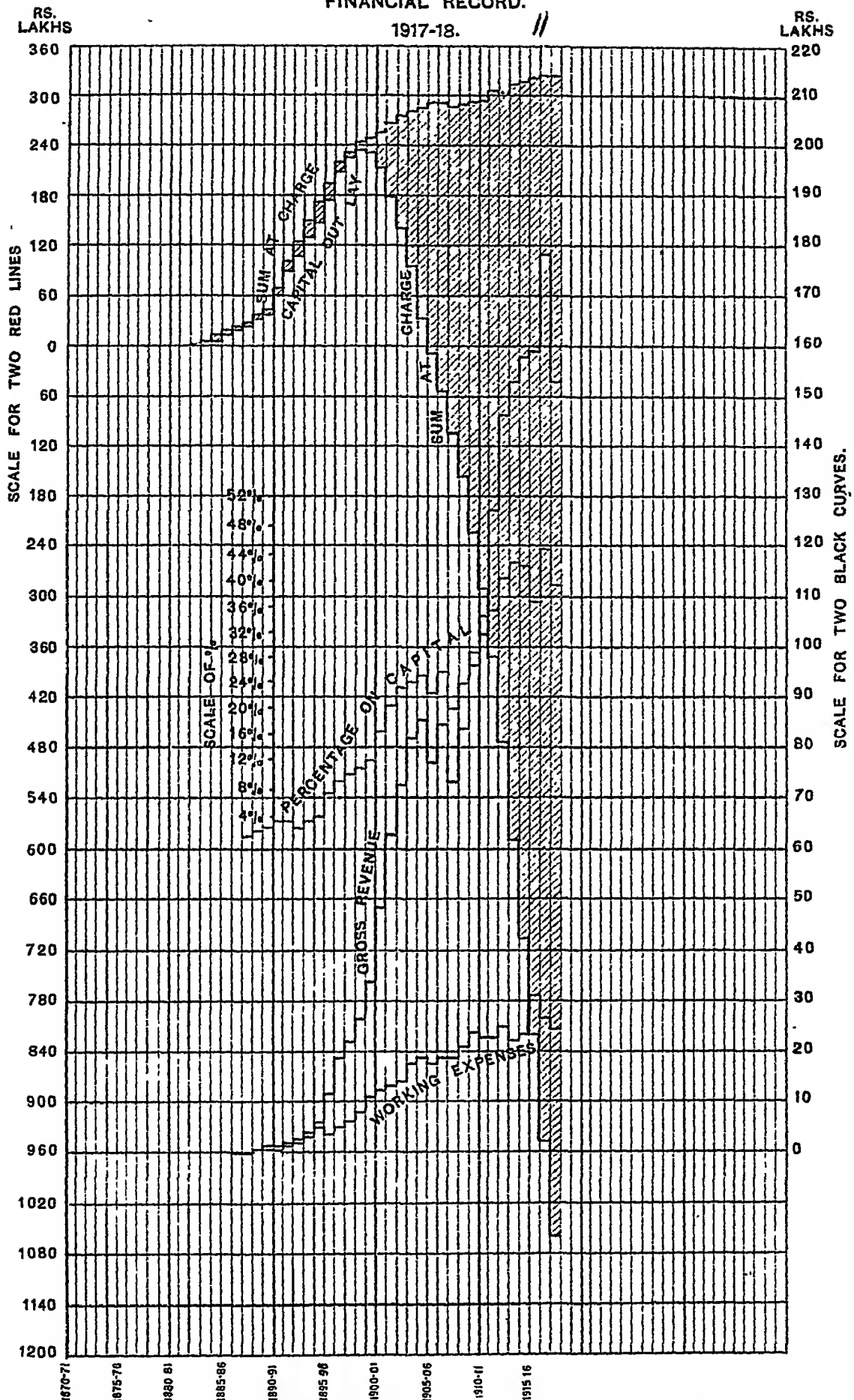
The Rabi winter supply is comparatively high and reliable on this canal.

discharge at canal head ; and the *rabi* duty to 197 acres.

LOWER CHENAB CANAL.

FINANCIAL RECORD.

1917-18.



N. B.—The intercepts in red area show arrears of interest (which are small on this canal) and which being added to the capital give sum at charge.

The intercepts in the blue area are accumulated profits all arrears of interest were paid up in 1898-99.

The intercepts between the two black lines give net revenue.

Remarks—This canal differs greatly from the older canals, having been completed much more rapidly and revenue earned much sooner. It has already reimbursed the whole of its capital from accumulated clear profits, and pays well over 20% on its capital.

Irrigation:
Kharif, 1917.
Rabi, 1917-18.

4. The following table compares the irrigation with the averages of the two previous triennia :—

Crop.				AVERAGE OF THE 3 YEARS ENDING		Irrigation of 1917-18.
				1913-14.	1916-17.	
				Acres.	Acres.	Acres.
Kharif	...	...	...	724,169	693,474	737,281
Rabi	...	...	...	1,549,128	1,600,866	1,549,844
Total				2,273,297	2,294,340	2,277,125

The area irrigated consists of 373,083 acres in old villages and 1,904,042 acres in colony villages.

The statement tabulated below shows the areas irrigated and those successfully matured during the year 1917-18 as compared with the averages of the two previous triennia :—

Period.				Average area irrigated.	Average area assessed.	Differant lost to assessment.
				Acres.	Acres.	Acres.
Triennium ending 1913-14	...	...	...	2,273,297	2,225,812	47,485
Triennium ending 1916-17	...	...	...	2,294,340	2,255,036	39,308
Year 1917-18	...	...	...	2,277,125	2,265,215	*11,910

*Over 4,000 acres of this is due to destruction of crops by hail.

5. The net revenue amounted to Rs. 1,28,02,664, which is equivalent to a return of 39.37 per cent. on the capital outlay to end of the year (Rs. 3,23,18,571).

Financial results based on collections.

Kharif, 1917.
Rabi, 1916-17.

The equivalent figures for the previous year are—

			Rs.
Capital outlay	...	...	3,23,55,018
Net Revenue	...	...	1,41,10,320
Percentage on Capital	...	...	43.61 per cent.

The decrease is due to—

(a) a deduction of Rs. 8,34,000 for cost of Civil Administration of the Lyallpur District for the 3½ years previous to the year under report—this omission by the Civil Department enhanced the percentage of previous years and reduced that of the current year,

(b) the decrease in the area irrigated during rabi 1916-17 owing to deficient rainfall and consequent low river.

The accumulated net profits have increased from Rs. 12,71,39,042 to Rs. 13,88,42,183 against a Capital of Rs. 3,25,18,571 invested at end of the year.

6. Canal closures.—The canal ran for 137 days in the kharif and 162 in the rabi, the periods of closure being 46 days in the kharif and 20 days in the rabi.

General remarks.

Area remitted.—The remissions amounted to 3,955 acres in the kharif and 7,955 acres in the rabi, the latter included 4,106 acres due to hail.

Duty.—The kharif duty works out to 95 acres per cusec of average discharge at canal head; and the rabi duty to 197 acres.

Flood levels.—An abnormal flood occurred in the river Chenab in September 1917, which rose to very high levels all the way down from the Alexandra Bridge, 9 miles above Khanki, to Ghari Gola 4 miles below.

UPPER JHELUM CANAL CIRCLE.

(SUPERINTENDING ENGINEER—MR. H. W. M. IVES.)

1. The expenditure (direct and indirect) amounted to Rs. 11,87,866 bringing the total outlay to the end of the year to Rs. 4,50,37,813.

Capital account.
Kharif, 1917.
Rabi, 1917-18.

The principal works carried out were :—

The final clearance of the Foreshore at Mangla; protection in side slopes up and downstream of the Mangla Regulator; clearance and protection of the "Slip Section"; improvements in connection with revetments and drainage of the Mangla Cut and Station area; construction of a bridge across the Karana Kas; village and foot bridges on Bhallowal distributary and its minors; district road bridges on Phalia distributary; additional bridges on Mangat Sohawa, Bhuchar and Bhallowal distributaries; 7 cart bridges, 2 foot bridges, 3 girder bridges, 3 inspection houses, with subsidiary buildings and many other small buildings.

Further construction of distributaries and water-courses which at the end of the previous year still remained to be completed.

The completion of the Weir across the Bhimber Diversion Channel at the end of the canal.

The undertaking and completion of a drainage scheme on the right side of the canal for reducing waterlogging which occurred near village Chak Qazi in the Gujrat District.

2. The expenditure of Rs. 61,697 was incurred mainly on raising the sills of undersluices at Suketar I and II and Jabba, providing a hand railing for Jabba Regulator. Renewing puddle upstream of Wing Wall Fall at R. D. 600 feet of Gujrat Branch; constructing of 3 cart bridges on Bhallowal Distributary, on Dhal Khurd Minor of Mangat Distributary, and on 2-L Minor of Mangat Distributary; and a Patrol Road on left bank at Mangla; and drainage of right side slope of canal and of station area at Mangla; and pitching slip area at Mangla.

Extension and improvements.

3. Expenditure of Rs. 4,42,060 was incurred on the maintenance and watching of canal and distributary banks and strengthening of weak reaches as the supply was increased; painting ironwork of all regulators in the Jhelum Division; special repairs to downstream protection at Suketar II and Jabba level-crossings; rebuilding of arch of Warina Syphon; maintenance of buildings, drains, plantation, removing slopes of Part A cut at Mangla; removal of material slipped into the canal at Mangla; completing slopes of Cut at Mangla; and pitching slopes downstream of left canal wing.

Nature of season and state of demand and supply
Kharif, 1917.
Rabi, 1917-18.

4. The following table gives the figures of rainfall during the year as well as the average in past years :—

Rainfall stations.	RAINFALL FOR 1917-18.			Average for previous years.	REMARKS.
	Kharif, 1917.	Rabi, 1917-18.	Total.		
	Inches.	Inches.	Inches.	Inches.	
Mangla	32.40	13.16	45.56	26.14	For 7 years.
Chillianwala	39.67	7.13	46.80	31.83	For one year only.
Wasu	32.33	5.23	37.56	31.70	Ditto.
Bisal	21.17	4.57	25.74	30.55	Ditto.
Bhachar	28.48	3.77	32.25	49.51	Ditto.
Pauranwala	33.35	6.53	39.88	35.90	Ditto.
Karariwala	28.28	5.72	34.00	28.40	Kharif 1916 only.
Mand	37.10	5.51	42.61	62.65	For one year only.

The rainfall was well distributed throughout the year.

The protracted monsoon resulted in a very favourable river supply which was well maintained during December and January, and fell in the middle of February to a minimum of 6,762 cusecs as compared with the minimum of 4,514 cusecs of the previous year.

The heaviest rainfall for a day occurred on 24th July at Mangla (5.6 inches of which 5.4 inches fell in 3½ hours). The *khariif* season was abnormally wet. Demand for canal water was, therefore, slack and the development of irrigation was disappointing, though showing a marked advance on the previous *khariif*.

This year was the second during which the waters of the 3 rivers (Jhelum, Chenab, and Ravi) were distributed between the Canals (Upper Jhelum, Lower Jhelum, (Upper Chenab, Lower Chenab and Lower Bari Doab) by rotational turns, and with success.

During the rabi the winter rains came late, but the river supply continued good, with the result that there was marked progress in the development of irrigation which was nearly one and a half times that of the previous *rabi*.

Area irrigated.
Khariif, 1917
Rabi, 1917-18.

5. The areas irrigated and assessed, compare as follows with the corresponding figures for the previous year :—

Division.	1916-17.			1917-18.		
	<i>Khariif</i>	<i>Rabi</i>	Total.	<i>Khariif</i>	<i>Rabi</i>	Total.
			<i>Irrigated areas.</i>			
Main Line, Gujrat Division...	13,699	19,607	33,306	15,920	18,184	34,104
Gujrat Branch, Phalia Division	28,714	55,595	84,209	51,288	91,614	142,902
Total ...	42,413	75,102	117,505	67,208	109,798	177,006
			<i>Area assessed.</i>			
Main Line, Gujrat Division ...	13,502	19,067	32,569	15,573	17,851	33,424
Gujrat Branch, Phalia Division	28,510	53,172	81,682	50,317	89,314	139,631
Total ...	42,012	72,179	114,191	65,890	107,165	173,055

The development of irrigation, although satisfactory, is still short of the Project Forecast. In the Project it was anticipated that by 1917-18 the irrigated area would be 280,000 acres, but this expectation has not been realized, principally owing to irrigation having commenced a year later than was anticipated.

The irrigation will, however, increase in the coming year when the irrigation on the 14-R and Phalia distributary is fully developed.

Practically all the Government land within the area to be irrigated on the Canal had been allotted by the end of 1917-18.

The irrigation of old village lands is, however, backward. The population of many of the old villages is insufficient to cultivate the land available and they seem unable or unwilling to obtain tenants, the result being that large areas of old village lands are as yet not cleared and brought under cultivation and development of irrigation is, therefore, retarded in proprietary villages.

6. The gross income from all sources amounted to Rs. 5,37,993 and the working expenses to Rs. 8,27,495, resulting in a loss of Rs. 2,89,502 or 0.64 per cent. on the capital invested. It is to be borne in mind, however, that the expenditure incurred on this canal is largely in the interests of the other two canals (Upper Chenab and Lower Bari Doab Canals).

7. The main features of interest of the year have been the steady raising of the supply in the Main Line, Upper Jhelum Canal—a work full of danger due to high embankments across numerous drainage crossings and the drawing up of and the carrying through of the programme of distributing the winter waters of the Jhelum, Chenab and Ravi rivers, between the 5 connected canals (the Upper Jhelum, the Lower Jhelum, the Upper Chenab the Lower Chenab and the Lower Bari Doab Canals). Both these most important works were very successfully accomplished. The Upper Jhelum Canal is no ordinary canal.

LOWER JHELUM CANAL.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER C.I.E.)

1. The expenditure (direct and indirect) amounted to Rs. 2,93,035, but the recovery of Rs. 1,074, effected from cultivators on account of acreage rate, reduced it to Rs. 2,91,961. This brought the total outlay to end of the year to Rs. 1,62,25,129. The expenditure was incurred chiefly, on remodelling the weir sluices, canal head, main canal, and certain distributaries of the Northern Branch; constructing telegraph office and signallers' quarters at Rasul and Baha-ud-Din; one block of senior clerks' quarters at Rasul; 24 Patwar Khanas on the Northern Branch; and sub-divisional officers' quarters at Uppu in the Hujjan Sub-Division.

2. Expenditure to the extent of Rs. 12,111 incurred on petty improvements to certain buildings, outlets, discharge flumes and demarcating certain drainages.

3. Expenditure of Rs. 3,16,371 was incurred on the annual maintenance of channels, masonry works, buildings, etc., and on repairs to Bay No. 7 and the downstream floor and talus of Bay No. 2 of the Rasul weir; diversion bund; Darapur Torrent on right bank of river Jhelum at Rasul, and in extending discharge flume at R. D. 650 Main Line.

4. The rainfall during the year compares as follows with that of the previous three years :—

District.	Season.	YEAR.			
		1914-15.	1915-16.	1916-17.	1917-18.
Shahpur	Kharif	17.02	3.96	14.36	22.16
	Rabi	4.22	0.36	1.78	3.42
	Total	21.24	4.32	16.14	25.58
Jhang	Kharif	13.40	1.98	9.77	17.77
	Rabi	2.93	0.36	0.85	2.22
	Total	16.33	2.34	10.62	19.99

The rainfall was much above the average of the previous three years, but the season was not altogether favourable to the *kharif* crops. The light but

persistent rain which occurred in April, May and June, though favourable to cotton sowings, damaged the ripe wheat and delayed the threshing operations very seriously. At the end of June zamindars were still occupied in carting their wheat to the several centres for sale. Concern regarding their wheat prevented cultivators from sowing cotton as extensively as they would otherwise have done. The heavy and protracted rain of August and September was beneficial to late sown *bajra* and *jowar* but damaged the yield of the early crops. Cotton was also damaged to some extent and early toria sowings were spoiled. There also occurred two hailstorms (on 3rd and 6th April 1918) over the area irrigated from the Hujjan, Kirana and Lalian distributary systems in the Kirana Division. The latter was heavier and affected 34 villages necessitating remission of revenue on 5,080 acres. The demand was slack in *kharif* and keen in *rabi* and the supply sufficient throughout the year except during the latter 3 months of the *rabi* season when the demand for canal water was keenest; owing to the delay that occurred in giving second waterings to the wheat crops by reason of rotational closures of the canal. The effect of rotational closures was not so much felt as in the previous year, as the cultivators had become more accustomed to them.

5. The canal was closed for 28 days during the *kharif* season and for 40 days during the *rabi* owing to slackness of demand for water, to closures for special repairs to works, and to floods in the river. The area remitted was 13,280 acres including 2,098 acres remitted under tenancy rules; 7,856 acres were remitted on account of damage by hail and the balance on account of other causes.

6. The areas irrigated and assessed compare as follows with the corresponding figures for the average of the preceding triennium :—

Area irrigated.
Kharif, 1917.
Rabi, 1917-18.

District.	AVERAGE OF THE THREE YEARS ENDING 1916-17.			1917-18.		
	<i>Kharif</i> .	<i>Rabi</i> .	Total.	<i>Kharif</i> .	<i>Rabi</i> .	Total.
<i>Irrigated areas.</i>						
Gujrat ...	4,233	8,592	12,825	3,982	7,004	10,986
Shahpur ...	189,197	491,179	679,376	189,828	448,007	632,835
Jhang ...	30,984	87,957	127,941	38,062	83,537	121,649
Total ...	232,414	587,728	820,142	231,872	533,598	765,470
<i>Assessed areas.</i>						
Gujrat ...	4,165	8,575	12,740	3,973	7,000	10,973
Shahpur ...	180,890	484,981	665,871	187,288	482,875	620,163
Jhang ...	37,633	86,417	124,050	31,928	83,128	121,054
Total ...	222,688	579,973	802,661	223,187	523,003	752,190

The decrease in area irrigated during *rabi* was partly due to the that fact by reason of excessive rainfall, a large area was sown as *barani* and ultimately matured without receiving canal water, and partly to the shortage of labour on account of recruiting activities and the prevalence of exceptionally severe malaria at the time of the *rabi* sowings. Also the heavy rains of September made the soil so wet that in many places it dried too late for ploughing and sowing.

Out of the total area of 765,470 acres irrigated during the year, 379,739 acres were in proprietary villages and 385,731 acres in colony villages.

7. The gross receipts (direct and indirect) amounted to Rs. 44,29,159, the working expenses to Rs. 9,15,765 and the net revenue to Rs. 35,13,394 equivalent to a return of 21.65 per cent. on the capital outlay to the end of the year. This return is about 2 per cent. less than that of the preceding year due to—

Financial results based on collections.
Kharif, 1917.
Rabi, 1916-17.

- (a) an increase of Rs. 2,92,000 in the Capital outlay,
- (b) the decrease in the area irrigated in *kharif* 1917 and *rabi* 1916-17; the former was due to excessive rainfall as explained in paragraph 6 above, while the latter was attributed in the previous year's report to drought and very low river supplies.

The figures for the year 1917-18, and the average of the preceding three years are compared below:—

Item.	Average Triennium 1916—17.	1917-18.
<i>Direct receipts.</i>		
Occupiers' rates	27,44,688	(a) 27,32,635
Miscellaneous receipts	64,608	(b) 58,156
Total Direct receipts	28,09,294	27,90,791
Indirect receipts	15,99,739	(c) 16,33,652
Total Direct and Indirect receipts ...	44,09,033	44,29,443
Charges to revenue	8,96,347	(d) 9,15,765
	35,12,686	35,13,394
Net revenue		
Percentage on capital	22.05	21.65
Net revenue less interest	29,79,878	29,78,513
Percentage on capital	18.36	18.29

(a) The decrease under occupiers' rates was due to causes explained in paragraph 7 above. The average rate per acre assessed works out to 3.83 against 3.42 for the previous triennium.

(b) The decrease was due to smaller realizations from Water Fener.

(c) The increase was due to the enhancement of Land Revenue.

(d) The working expenses were about Rs. 19,000 more than the average of the last 3 years. This was chiefly due to the exercise of greater economy during the years 1914-15 and 1916-16.

The rate per acre of area assessed was 1.22 against 1.12 in the preceding triennium.

8. (a) The agricultural and other conditions of the year have been described in paragraph 4 above.

General remarks.

(b) The following remodelling works were commenced during the year:—

- (1) Canal Head, Bays Nos. 1 and 2.
- (2) Undersluices.
- (3) Experimental remodelling of one bay of the weir.
- (4) Main Line.
- (5) Fitting of the Mithalak distributary with Kennedy's gauge outlets from head to tail.

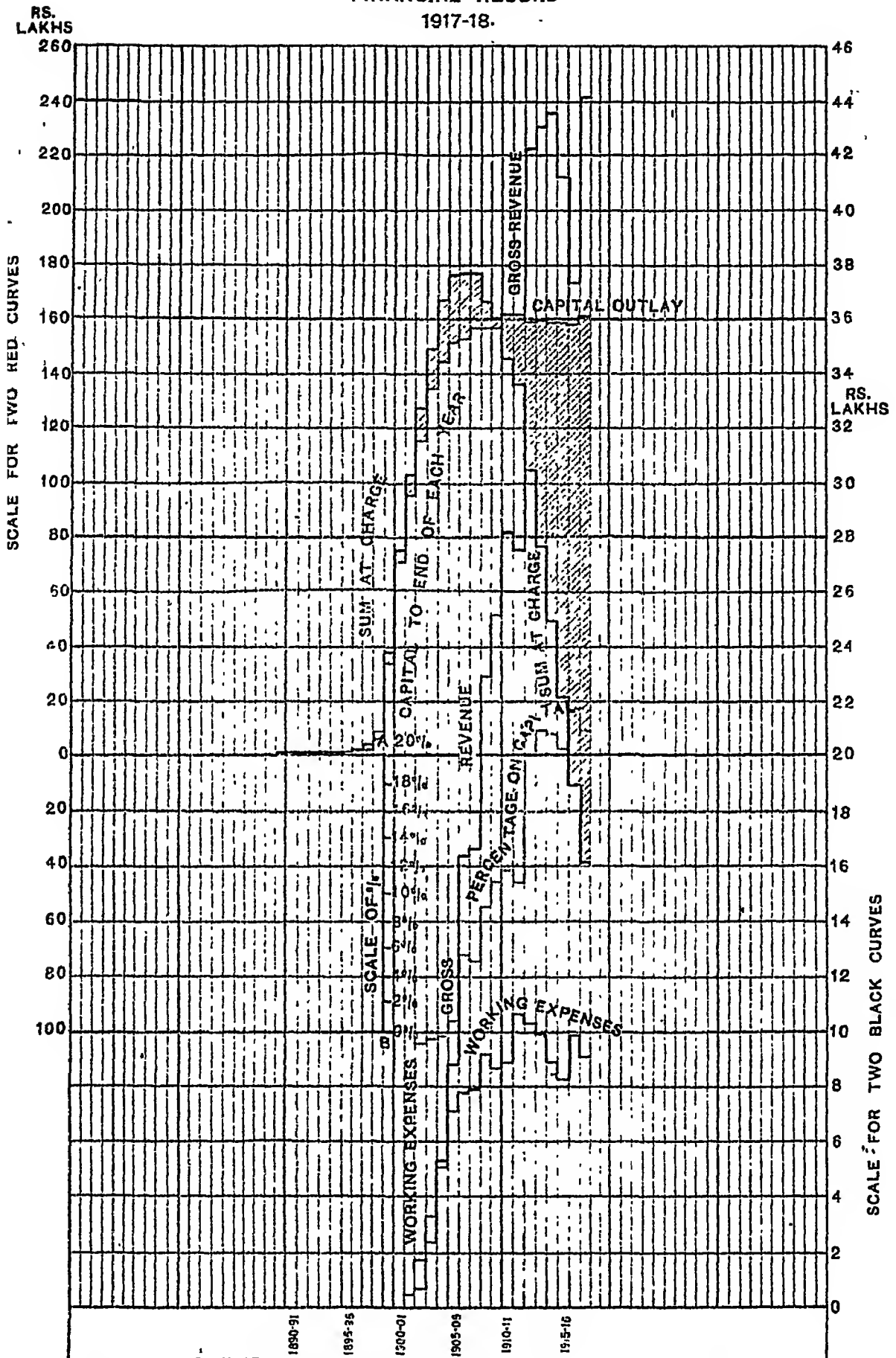
The Superintending Engineer considers that it is premature to say anything at present with regard to the improvement to be expected from this application of Kennedy's gauge outlets. Complaints may come in from the several chaks at the head of the distributary but this may be due to the people having been accustomed to receive much more water in the past than they were actually entitled to. The remodelling work of several distributaries estimates for which have been sanctioned, could not be pushed on by reason of the shortage of labour and stringency of rates and the progress was slow.

(c) Irrigation on the Sulki Branch is steadily improving. The decrease of irrigation this year is partly due to reduction of certain outlets which has previously been doing irrigation above the authorized figures and partly to causes mentioned in paragraph 6 above.

LOWER JHELM CANAL.

FINANCIAL RECORD.

1917-18.



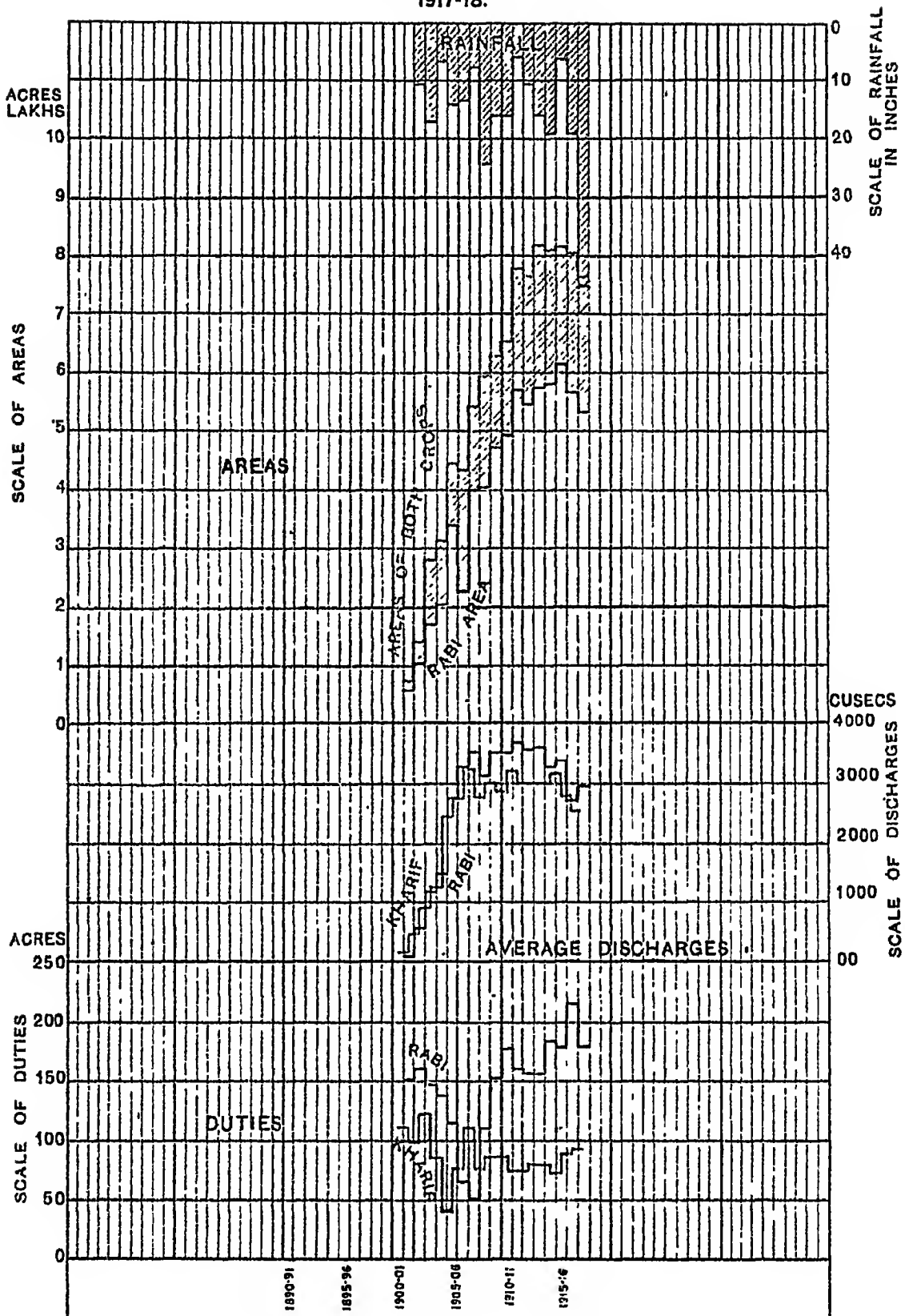
N.B.—The intercepts in the red area show arrears of interest which, added to the capital, give the sum at charge.

The intercepts in the blue area give the accumulated profits.

The scheme was commenced in earnest in 1898-99 and opened in 1901. Until 1905-06 the canal did not pay any interest on its capital cost this being due to free remissions of water rates on new irrigation.

LOWER JHELM CANAL.

WORKING RECORD.
1917-18.



N.R.—The intercepts in red area give the Kharif irrigation each year. The discharges are measured at mile 14 of the main canal and give averages for each crop. The duties are derived from these areas and discharges.

UPPER SUTLEJ INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. F. W. K. YEOMANN.)

Capital account.
Kharif, 1917.
Rabi, 1917-18.

1. No expenditure was incurred but the canal received a credit of Rs. 2,523 on account of stock transactions.

2. Expenditure amounted to Rs. 12,186 and was chiefly incurred on constructing bridges at R. Ds. 9,968 and 17,719, Upper Sohag Canal; widening, regrading and extending the Dhing Shah Distributary; remodelling Faridpur Minor head regulator R. D. 55,700; head of Pakpattan Distributary R. D. 22,700 Sohag Branch; raising the sill of Haveli Distributary; constructing a high road bridge on Kaler Distributary of Upper Sohag Canal at R. D. 14,250; a double regulator R. D. 25,000 of Turbat Distributary at head of new Kot Bedi Distributary; providing a Notch fall at Shah—Yoppa regulator and widening the head regulator, Gobindpur Minor, etc.

3. Expenditure amounted to Rs. 2,01,324 which, in addition to ordinary maintenance and silt clearance of channels, was incurred on the following works:—

Diversion cut in Manak Dehka; remodelling Attari Distributary; excavating the new Dhimka head reach of Khanwah canal; excavating the new diversion cut, Katora canal; constructing 2.5 feet fall at tail of Manak Dehka diversion cut; and excavating Reserve Head.

Area irrigated.
Kharif, 1917.
Rabi, 1917-18.

4. The following table compares the irrigation of the year with the averages of the two previous triennia:—

Crops.		AVERAGE OF 3 YEARS ENDING				1917-18.		REMARKS.
		1913-14		1916-17.		Gross.	Net.	
		Gross.	Net.	Gross.	Net.			
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Kharif	...	100,024	145,398	157,161	147,363	169,900	183,071	
Rabi	...	128,253	128,253	184,698	184,698	247,057	247,057	
Total	...	208,177	273,619	341,859	331,061	437,857	431,028	

The net area assessed during 1917-18 exceeded by 157,379 and 99,967 acres as compared with the averages of the two triennia ending 1913-14 and 1916-17 respectively.

5. The gross income amounted to Rs. 7,50,234 and working expenses to Rs. 3,82,314 showing a net revenue of Rs. 3,67,920 or 20.24 per cent. on the capital invested. The figures of gross income and net revenue are higher than any during the last 16 years.

Financial results based on collections.
Kharif, 1917.
Rabi, 1916-17.

6. (a) The following table shows the dates of opening and closing of the canals together with the corresponding dates of previous year:—

Name of Canals.	DATE OF OPENING		DATE OF CLOSING		NUMBER OF DAYS CANAL WAS IN FLOW.		REMARKS.
	1917.	1916.	1917.	1916.	1917.	1916.	
Katora ...	Forenoon, 9-5-17.	Forenoon, 29-5-16.	Afternoon, 19-11-17.	Forenoon, 9-11-16.	105	104	
Khanwah ...	Forenoon, 14-5-17.	Forenoon, 30-5-16.	Afternoon, 31-10-17.	Afternoon, 30-10-16.	144	154	
Upper Sohag ...	Ditto	Forenoon, 29-5-16.	Afternoon, 10-12-17.	Afternoon, 30-10-16.	101	155	
Lower Sohag ...	Ditto	Afternoon, 31-5-16.	Afternoon, 23-11-17.	Afternoon, 24-9-16.	168	110	

(b) The river supply during the month of May and June was rather low, but the supply was satisfactory, on the whole, even during July, August and September. There were no high floods, but very heavy rains towards the end of August and October, gave many anxious days and nights in watching the canals and their heads.

The failed area during *kharif* amounted to 26,210 acres or 19·97 per cent. of the area irrigated against 13·95 per cent. in the previous year. During *rabi* 15,538 acres or 8·29 per cent. of the area irrigated were remitted against 17·7 per cent. in the *rabi* of 1916-17. The high percentage of remissions in *kharif* was due to rain and floods which were abnormal. During *rabi* there would have been very little in the way of remissions but for a severe and widespread hailstorm which occurred in April 1918.

6. The total areas, irrigated and assessed during the year, were the highest recorded on the Sidhnai system, but taking each crop separately the area irrigated was the 2nd largest in both crops whereas that assessed was the highest on record in *rabi* and 2nd highest in *kharif*.

7. The total income from all sources amounted to Rs. 7,01,625 against Rs. 5,89,749 in the preceding year. Working expenses amounted to Rs. 158,769 against Rs. 159,012 in 1916-17. The net income amounted to Rs. 5,42,856 or 40·75 per cent. on the capital outlay, against Rs. 4,30,737 or 32·25 per cent. in the preceding year.

The uncollected balance of the assessment of occupier's rates amounted to Rs. 1,277.

8. Towards the end of August, spills from the Ravi occurred near Tulamba and reached the Abdul Hakim canal at several places but did no damage.

During the course of the winter months discharge observations of the river Chenab at Haveli were continued with the object of securing more data for the Haveli Project.

Throughout the year there was a very marked shortage of labour in the Sidhnai tract for which extension of irrigation on the Lower Bari Doab Canal, the recruiting campaign, and a severe epidemic of malarial fever were responsible.

INDUS INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. A. R. MURRAY.)

1. The expenditure on works amounted to Rs. 1,564 as compared with Rs. 12,271 during the preceding year, but the credit balance of Rs. 3,185 under suspense reduced it to Rs. 1,621. The expenditure was incurred on completing the water supply scheme at Dera Ghazi Khan.

2. Rupees 68,966 were spent against Rs. 1,15,320 in the preceding year. The following were the more important works in progress:—

Diverting Fazilwah canal; constructing Kotla Ring bund; the bund between ring bunds Nos. 3 and 1; Sahiban and Chibri ring bund; Leghari ring bund between bund No. 3 and Dhundi Kutab canal; new Hairo groyne; diversions of the Sahiban canal and its branch the Banuhan; and extension of the Panjtanwala groyne for supplying water to Nur Dhundi Canal.

3. The expenditure amounted to Rs. 1,90,140 as compared with Rs. 1,37,316 in the preceding year and was incurred on repairs to damage done by hill torrents, silt clearances of canals, strengthening of certain flood embankments and other miscellaneous works.

4. The average rainfall during *kharif* was 11·55 inches and during *rabi* 1·38 inches against averages of 3·85 and 1·60 inches, respectively.

The Indus was low in the earlier portion of the *kharif* season and canal supplies precarious. A satisfactory rise was recorded at end of July. During August and September there was heavy rain which caused the hill torrents throughout the entire length of the division to flow with unprecedented violence causing considerable damage.

The following statement shows the period during which canals were in flow :—

Name of canals.	DATES OF		No. of days canal was in flow.
	Opening.	Closing.	
Massuwah	27th May 1917	19th September 1917.	108
Fazalwah	15th May 1917	8th October 1917	147
Manka	15th May 1917	8th October 1917	147
Shoria	14th May 1917	5th October 1917	145
Kasturi	13th May 1917	2nd October 1917	123
Dhingane	30th May 1917	3rd October 1917	122
Chibri	17th May 1917	23rd September 1917.	131
Sahiban	27th May 1917	11th October 1917	136
Gamun	15th May 1917	28th September 1917.	123
Nur Dhundi	15th May 1917	1st October 1917	138
Dhundi Kutab	17th May 1917	1st October 1917	125
Kadra	19th May 1917	18th October 1917	153

5. The following table compares the areas assessed during the year with the average of the previous two triennia :—

Name of crop.					AVERAGE OF 3 YEARS FENDING		1917-18.
					1913-14.	1916-17.	
					Acres.	Acres.	Acres.
<i>Kharif</i> ... ..	...	...	...	...	130,420	114,223	86,619 (A)
<i>Rabi</i> ... ..	...	...	...	...	65,687	68,346	54,444 (B)
Total ...					196,507	182,559	141,063

The figures exhibited at (A) and (B) above do not include the areas omitted which amounted to 53,423 acres in *Kharif* and 9,727 acres in *rabi*. The gross areas irrigated during *Kharif* and *rabi* were 140,012 and 64,171 acres, respectively, against 179,941 and 85,217 acres in 1916-17.

The decrease in irrigation, both in *kharif* and *rabi*, is attributable to the unprecedented severity of the hill torrent floods of August and September consequent on the excessive rainfall in the Suleman Hills. Large areas in the irrigated tract were subjected to serious inundation. This also accounts for the abnormally high figures of remissions.

6. The total income from all sources was Rs. 4,41,690 against Rs. 5,28,309 in 1916-17 and the total expenditure under all heads amounted to Rs. 3,99,182 against Rs. 8,98,604. The net profit was, therefore, Rs. 42,508 or 1.42 per cent. on the capital outlay against Rs. 1,29,705 or 4.35 per cent. in the preceding year and an average of Rs. 45,519 in the previous triennium.

Financial results based on collections.
Kharif 1917.
Rabi 1916-17.

The uncollected balance of assessment of occupier's rate was Rs. 32,225.

General remarks.

7. The year was a most unfortunate one for these canals.

Towards the end of the monsoon hill torrents caused extensive damage. Large volumes of water swept across the canal systems of the district, causing many breaches and seriously interfering with both *kharif* and *rabi* irrigation. During the winter months efforts had to be largely concentrated on rectifying the damage done and no new works with the object of extending irrigation could be undertaken. Work was interfered with, to a great extent, in the autumn months by a severe epidemic of malaria, and during the close of the working season the insurrection of the Marri tribesmen in the hills bordering the tract and the punitive expedition which followed, resulted in some dislocation of labour.

The continued westward drift of the river Indus opposite the Dhundi Kutab canal head caused considerable silting of the head reach of the canal resulting in shortage of irrigation throughout this system. There was also erosion at the head of Sahiban canal which caused shortage of supply.

The following are some of the works of importance contemplated for which proposals are in hand :—

- (a) Remodelling of Kasturi canal, including *chakbandi* and provision of masonry outlets together with two new distributaries to take up some 7,500 acres of first class land.
- (b) Remodelling of Dhingana canal together with *chakbandi* and provision of *pacca* outlets.
- (c) Remodelling of Sohan branch.
- (d) Remodelling of Sahiban canal and Banuhan branch.
- (e) On all these canals water does not reach the tail even at times of high supply and a great deal of inconvenience is caused to cultivators and local officers in preparing *warabandis* and carrying them out. Cultivators are plentiful, soil is good and once these channels have their supplies equitably distributed, there should be an increase in revenue at a comparatively small cost.

Minor Irrigation Works.

SHAHPUR IMPERIAL (INUNDATION) CANALS.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER, O. I. E.)

Capital account.
Kharif 1917.
Rabi 1917-18.

1. No expenditure.

Extensions and improvements.

2. No expenditure.

3. Expenditure to the extent of Rs. 23,617 was incurred on ordinary maintenance and repairs and silt clearance.

4. The rainfall was 26.48 inches against 20.08 inches in the previous year. During the *kharif* season the rainfall was 21.03 inches and during the *rabi* 4.85 inches. Of the *kharif* rainfall 1.31 inches fell in April, 1.44 inches in May, 2.09 inches in June, 2.84 inches in July, 10.22 inches in August and 3.73 inches in September. In the *rabi* no rain fell during October and November; in December the fall was 0.38 inch, in January 0.32 inch, in February 0.28 inch and in March 4.17 inches.

The canals were opened early in May, and closed early in September, demand for canal irrigation ceased. The canals worked satisfactorily during the *kharif* season. There were some hailstorms during the harvest and some damage was done to the crops.

5. The irrigation of the year compares as follows with the averages of the two previous triennia :—

Season.				AVERAGE FOR THE THREE YEARS ENDING		Actual for 1917-18.
				1913-14.	1916-17.	
				Acres.	Acres.	Acres.
<i>Kharif</i>	...	...	...	16,175	15,117	17,649
<i>Rabi</i>	...	...	...	20,363	23,958	24,985
Total				36,538	39,075	42,633

The area successfully matured and assessed was 39,518 acres as against 34,439 acres, the average of the previous triennium. The increase was due mostly to favourable conditions of the river and good rainfall during the *Kharif* season. The previous year's figures for gross and matured areas were 46,769 and 41,981 acres, respectively. The decrease during the year under report as compared with the previous year was due to timely rainfall which enabled irrigators to dispense with canal water to a greater extent.

Revenue was remitted on 3,115 acres, *viz.*, 189 acres by reason of flooding, and 2,926 acres by reason of bad germination.

6. The gross revenue realized amounted to Rs. 1,35,584 and working expenses to Rs. 60,498; leaving a net revenue of Rs. 75,086 which is equivalent to a return of 34.78 per cent. on Rs. 2,15,914, the capital outlay up to date. Details compare as follows with the averages for the preceding triennium :—

Detail.					Average for 3 years ending 1916-17.	Actual for 1917-18.
					Rs.	Rs.
Receipts direct	...	...	...	...	85,069	95,186
Receipts indirect	...	...	...	...	22,901	40,398
Total					1,07,970	1,35,584
Working expenses	...	...	...	...	50,090	60,498
Net revenue	...	...	...	...	57,880	75,086
Percentage of net revenue on capital					26.76	34.78

The increase is due to timely rainfall and favourable conditions of the river.

7. The Imperial Inundation Canals began and ceased to flow on the following dates :—

Name of Canal.				Began to flow.	Ceased to flow.
Eastern Station Canal	...	...	...	6th May 1917	30th August 1917.
Western Station Canal	...	...	...	10th May 1917	4th September 1917.
Sahiwal Canal	...	...	...	7th May 1917	4th September 1917.

GHAGGAR CANALS.

(SUPERINTENDING ENGINEER—MR. G. O. LAURIE.)

- Capital account.
Kharif 1917.
Rabi 1917-18.
1. There was a small expenditure of Rs. 40 under this head. This brought the outlay to date to Rs. 6,61,611 (Imperial Rs. 3,76,157 and Contribution Rs. 2,85,454).
2. Expenditure was Rs. 7,445 (Rs. 6,146 under Imperial and Rs. 1,299 under Contribution) and was incurred chiefly on protective pitching in the river and the canal heads, also in certain improvements to heads of minors and in new outlets.
3. Expenditure was Rs. 6,872 under Imperial and Rs. 1,968 under Contribution as compared with Rs. 6,836 and 1,844 respectively, for the preceding year. The expenditure was normal.
4. (a) Kharif 1917.—The monsoon burst early in June though rain had been received at intervals on the Ghaggar Canals during April and May. It was unusually active in July, August and September when there were remarkably heavy falls for this dry tract.
- Nature of season and state of demand and supply.
Kharif 1917.
Rabi 1917-18.

The heaviest falls recorded were—

- 6·3 inches at Manjukhera on 19th September 1917,
6·0 inches at Surewala on 15th September 1917,
6·3 inches at Ota on 2nd September 1917,

and these falls are heavier than those for a whole year often amounts to. Water first reached Ota weir on the 11th of June which was unusually early, but the supply was poor. The direct minors, and the Northern and Southern Ghaggar Canals were opened on the 20th June, 6th July and 30th June, respectively. The demand to begin with was poor as these canals do not usually open so early.

Water was escaped down the river during—

June 22nd to 30th.

August 4th to 9th and 26th to 31st.

September 1st and 10th to 30th.

The Northern and Southern Canals were in flow for 81 days each during *kharif*.

(b) Rabi 1917-18.—There was heavy rainfall in the last week of October at almost every station. The highest fall recorded was 4·00 inches at Silwala in the Bikaner State. There was little or no rain afterwards during the *rabi* period except light showers which were insufficient for properly maturing the crop. The area cropped was large but the outturn was poor. Supply for ploughing and sowing was good, but full advantage of it was not taken owing to the late and heavy rains having caused a serious outbreak of malaria. The Northern and Southern Canals were in flow for 42 and 41 days, respectively, during *rabi*. Water was escaped down the river during—

October 1st to 11th, 30th and 31st.

November 1st to 21st.

The maximum downstream gauge was 10·6 feet on the 10th November, as against a maximum recorded gauge of 10·9 feet on 9th August 1912.

(c) Rainfall.—The average rainfall of all stations for the year was—

British	...	...	...	38·60 inches
Bikaner	...	...	...	29·58 "

as against an average annual rainfall of about 10 inches for the previous 18 years. The rainfall was, therefore, extraordinarily heavy and considerable damage was done to canal buildings.

Area irrigated.
Kharif 1917.
Rabi 1917-18.

5. The following table shows the area irrigated in British and Bikaner territories during the last 5 years ending 1917-18. The area in British territory includes area assessed by the Civil Department.

Crop.	1913-14.			1914-15.			1915-16.			1916-17.			1917-18.		
	British.	Bikaner.	Total.	British.	Bikaner.	Total.	British.	Bikaner.	Total.	British.	Bikaner.	Total.	British.	Bikaner.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Kharif	9,380	5,115	14,805	9,380	1,663	10,993	4,218	12	4,230	10,237	3,254	13,491	9,803	1,577	11,280
Rabi	3,035	1,720	4,755	15,000	9,403	21,553	17,788	3,166	20,914	19,030	8,760	29,876	12,220	6,924	19,214
Total	12,755	6,835	19,560	24,380	8,066	32,131	22,005	3,163	25,174	29,327	12,010	40,367	21,823	8,671	30,494
Total number of days canal was in flow.	Northern Ghaggar Canal.		73	101			50			93			123		
	Southern Ghaggar Canal.		80	100			73			93			112		

The above figures do not include the area under *palever*. The land under fluctuating assessment is not subject to water rates but the canals receive a credit for any fluctuating revenue in excess of an average of Rs. 37,000 per annum during a ten years period.

The amount of occupier's rates assessed was Rs. 4,271 in *Kharif* and Rs. 12,126 in *rabi* and the rate per acre assessed works out to 4.64 and 2.49 respectively.

Financial results based on collections.
Kharif 1917.
Rabi 1916-17.

6. The operations of the year resulted in a loss of Rs. 12,165 which is equivalent to 3.28 per cent. on the capital outlay compared with a loss of Rs. 8,630 equivalent to 2.29 per cent. on capital outlay in the previous year.

The financial position of Ghaggar Canals is now under consideration.

7. (a) *Agricultural and other conditions of the year.*—The canals were in flow for a longer period than usual as will be seen from the table given above. The *Kharif* crop was somewhat damaged by excess of rainfall and the *rabi* crop by scarcity of it at the period of maturing.

The approximate value of crops matured on the Ghaggar Canals in British territory amounted to Rs. 7,78,659 against Rs. 8,88,547 in the previous year. It will thus be seen that these Canals provide a valuable public benefit to a very dry tract.

The principal crops grown are wheat and rice.

(b) *Nature and scope of contemplated new works and progress made on the preparation of new projects.*—The proposal for raising the reservoir level by 3 feet has been deferred pending decision regarding Bhakra Dam Project on Sutlej river.

8. The following statement of irrigation has been supplied by the Bikaner State :—

Canals.	1916-17.			1917-18.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
	Acre.	Acre.	Acre.	Acre.	Acre.	Acre.
Northern Canal	2,403	5,079	8,382	1,218	5,957	6,575
Southern Canal	851	2,807	3,658	459	1,637	2,096
Total	3,254	8,786	12,040	1,677	6,994	8,671
Flow	3,254	8,786	12,040	1,677	6,994	8,671
Lift ... ..	...	...	...	...	...	...
Total as above	3,254	8,786	12,040	1,677	6,994	8,671

The following table shows the working of the canals in the Bikaner State :—

Particulars.					1916-17.	1917-18.
<i>Receipts.</i>					Rs.	Rs.
Water rate ... ..	...	...	...	...	27,616	17,457
Miscellaneous ... ..	...	...	...	...	337	415
Total ... ..	...	...	...	...	27,953	17,872
<i>Working Expenses.</i>						
Establishment ... ..	...	...	...	...	2,756	3,127
Other expenses ... ..	...	...	...	...	2,269	4,635
Total ... ..	...	...	...	...	5,025	7,762
Profit or Loss (Net) ... ..	...	...	...	...	+22,928	+10,110

It will be seen that the Bikaner State got a profit of 3.54 per cent. on the working of the canals for the year under report, the contribution capital account standing at Rs. 2,85,454.

LOWER SUTLEJ INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. A. R. MURRAY).

Capital accounts.
Kharif 1917.
Rabi 1917-18.

1. These canals are classified under "43—Minor Works and Navigation" for which no capital account is kept.

2. The expenditure amounted to Rs. 43,496 against Rs. 45,922 in the preceding year and Rs. 44,437 the average of the previous triennium.

Extensions and improvements.

The more important works undertaken were :—

Diversion of the Mohammedwah canal; new head regulator for Thada Thaim minor and Junction Channel to feed Sheikhwah Sharqia distributary; and flood embankment between Ghulamwah and Mailsi canals.

3. The expenditure amounted to Rs. 92,240 against Rs. 86,519 in the preceding year and Rs. 1,07,501, the average of the previous triennium and was incurred on ordinary maintenance of channels, silt clearances, &c.

4. The total rainfall at Lodhran during *kharif* was 18.42 inches against an average of 4.46 inches. The season was chiefly remarkable for the abnormally heavy rainfall in August and September 1917 which caused serious damage to standing crops. The rainfall during *rabi* was 0.83 inches against an average of 1.01 inches.

River supplies were, on the whole, favourable. Floods occurred in August, September and October.

The following statement gives the dates of opening and closing of the canals during the year :—

Name of canal.	DATE OF		Number of days canal was in flow.
	Opening.	Closing.	
Hajiwah ...	13th May 1917	12th November 1917	183
Mailsi ...	30th April 1917	12th November 1917	190
Mohammedwah ...	22nd May 1917	10th December 1917	204
Bahawalwah Lodhran	23rd May 1917	6th December 1917	108

The Mohammedwah canal continued in flow well on into the *rabi* and the Mailsi would have done the same if the Sutlej had not cut in above the head regulator, thus permitting the supply entering at the off-lake to break back into the river.

5. The following table compares the areas irrigated and matured with the average of the preceding triennium :—

Season.	Canal.	AVERAGE FOR 3 YEARS ENDING 1916-17.		1917-18.	
		Irrigated area.	Matured area.	Irrigated area.	Matured area.
Kharif	Hajiwah ...	Acrea. 14,998	Acrea. 11,643	Acrea. 17,338	Acrea. 7,430
	Sutlej series ...	129,900	109,702	144,483	107,937
	Total ...	144,898	121,347	161,821	115,367
Rabi	Hajiwah ...	27,264	24,272	28,628	25,114
	Sutlej series ...	168,343	157,684	174,735	161,543
	Total ...	195,607	181,956	203,363	186,657
GRAND TOTAL ...		340,505	303,303	365,184	302,024

The failed area amounted to 63,155 acres (*viz.*, 46,454 acres during *kharif* and 16,701 during *rabi*) against 43,271 (21,881 in *kharif* and 21,390 in *rabi*) in the preceding year. The increase in remissions during *kharif* is almost wholly attributable to excessive rainfall.

6. The total income from all sources was Rs. 668,484 against Rs. 6,26,728 in 1916-17 and the total expenditure Rs. 2,52,089 against Rs. 2,39,727 in the preceding year. The net revenue amounted to Rs. 4,16,395 against Rs. 3,87,001 in 1916-17 and an average of Rs. 3,59,892 in the previous triennium.

Financial results based on collections.
Kharif 1917.
Rabi 1916-17. —

The uncollected balance of assessment of occupiers' rates amounted to Rs. 6,108 only.

7. The gross area irrigated is the 2nd largest on record. The matured area is greater than any of the preceding years except 1916-17 and 1914-15, when it amounted to 320,613 and 347,483 acres respectively.

General remarks.

The result of the year's operations may, therefore, be said to be, on the whole satisfactory.

Good progress has been made with remodelling of distributary channels, *chakbandi* and piping. In connection therewith the Diwanwah branch of the Mailsi canal and certain reaches of the Mohammedwah canal have been widened to admit of correct supplies being carried.

River erosion continued opposite the lower end of the diversion of the Mohan medwah canal constructed in 1916-17 and a retired diversion has had to be dug. The river at this site now shows signs of having reached a condition of stability.

Very serious and rapid river erosion occurred in August and September opposite the Mailsi canal, a short distance above the Head and Escape regulator at Islam. The canal supply unfortunately broke away into the river at this point and was lost for purposes of irrigation at the commencement of the *rabi* season. As a temporary expedient a small diversion of the canal has been excavated and proposals are under consideration for a large diversion well set back from the river, including a new head regulator and escape.

Progress on works, more especially in the Mailsi Tahsil, was hampered by scarcity of labour, caused partially by a malaria epidemic in the autumn, but mainly due to the recruiting campaign. Some criminal tribe labour has been introduced.

The dismantling of the Sutlej Valley Railway has created difficulties in regard to transport to which the dearth of camels and carts has also contributed.

CHENAB INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. A. R. MURRAY.)

Capital account.
Kharif 1917.
Rabi 1917-18.

1. There is no capital account for these canals. They are classified under "43—Minor Works and Navigation".

2. The total expenditure was Rs. 16,172 against Rs. 23,706, in 1916-17, incurred mainly on extending the head of Wali Mohammad canal, excavating head for the Matithal canal and providing outlets on certain distributaries of the Sikandrabad canal.

Extensions and improvements.

3. The expenditure was Rs. 79,552 against Rs. 78,093 in the preceding year. It was incurred on ordinary silt clearances of canals, repairing breaches, strengthening banks, etc.

Maintenance and repairs.

4. The rainfall during *kharif* was 17.48 inches in Tahsil Multan and 20.85 inches in Tahsil Shujabad against an average of 4.90 inches and 4.27 inches respectively. During August and September, rainfall was phenomenal all over the District and was accompanied by heavy floods resulting in some damage to standing crops.

Nature of season and state of demand and supply.
Kharif 1917.
Rabi 1917-18.

The rainfall during *rabi* was 1.37 inches in Multan and 1.07 inches in Shujabad against an average of 1.46 and 1.14 inches respectively.

The river Chenab rose gradually during the month of June and a flood occurred on the 21st. The river fell again towards the end of month but rose in July and the supply was well maintained until the close of the irrigating season.

The following statement gives the dates of opening and closing of canals:—

Canals.	DATE OF		No. of days canal was in flow.
	Opening.	Closing.	
Matithal	3rd June 1917	3rd November 1917.	136
Daurana Langana	23rd May 1917	8th November 1917.	170
Wali Mohammad	23rd May 1917	8th November 1917.	170
Sikandrabad	10th May 1917	9th November 1917.	170
Gajjubatta	19th May 1917	9th November 1917.	170
Balochanwah	5th June 1917	4th October 1917	122

The Matithal ran dry by the middle of October and the Wali Mohammad and Sikandrabad on the 20th and 22nd October respectively, but towards the end of that month the river unexpectedly rose and these canals were re-opened.

5. The following table compares the area irrigated during 1917-18 with the averages of the two previous triennia:—

Crops.	AVERAGE OF 3 YEARS.		1916-17.	1917-18.
	1913-14.	1916-17.		
	Acres.	Acres.	Acres.	Acres.
Kharif	99,307	93,881	93,557	97,444
Rabi	88,547	101,439	111,518	131,598
Total	1,87,854	195,319	205,075	229,042

The area which failed to mature was 21,031 acres or 21.59 per cent. of the area irrigated during *kharif* 1917 and 10,162 acres or 7.72 per cent. during *rabi*. The high percentage of remission during *kharif* is attributable to the abnormal rainfall of August and September which damaged crops in certain areas. The total areas irrigated and assessed during *rabi* were the highest on record.

6. The total income from all sources was Rs. 5,12,126 against Rs. 4,43,797 in 1916-17 and the total expenditure under all heads was Rs. 1,49,753 against Rs. 1,55,764. The net income was, therefore, Rs. 3,92,373 against Rs. 2,88,033 in the preceding year and an average of Rs. 2,95,171 in the previous triennium.

The uncollected balance of the assessment of occupier's rate was Rs. 5,176.

7. Both the areas irrigated and assessed are the highest on record. The results of the year's working are, therefore, eminently satisfactory.

General remarks.

No large works were taken in hand during the year except the annual silt clearances which have to be curtailed to some extent owing to difficulties in obtaining labour. The main factor in causing this shortage was the unreasoning panic to which the recruiting campaign gave rise. A severe epidemic of malaria in the autumn which continued well into January, and plague which raged during the winter months in the city of Multan and adjacent villages, also had serious effect.

Fair progress was made in improving distributary channels by *chakbandi*, piping and building of tail clusters. In one case an agreement was arrived at with the cultivators by which a large water-course was taken over, improved and used as a distributary, replacing many miles of large *zimindari* water-courses running parallel to each other. Great improvement in irrigation may confidently be expected if such schemes were more generally adopted on the Inundation Canals.

No new works of any magnitude are contemplated owing to economy necessitated by the war.

MUZAFFARGARH INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. A. R. MURRAY.)

1. No capital account is kept for these canals. They are classified under "43—Minor Works and Navigation and Agricultural."

Capital account.
Kharif 1917.
Rabi 1917-18.

2. The expenditure amounted to Rs. 38,759 against Rs. 36,463 in the preceding year, and was incurred in completing and extending remodelling, piping, constructing inlet regulator, diversion of the Karam canal, building new falls, stopdams and tail clusters.

Extensions and improvements.

In addition to the above Rs. 3,427 against Rs. 10,739 during the preceding year were spent from the "Agricultural fund" on the completion of the Khangarh inspection house and subordinate rest-house, and providing tube-wells at certain other inspection houses.

3. The expenditure amounted to Rs. 1,68,461 against Rs. 1,76,475 in 1916-17, and was incurred on ordinary silt clearances of canals, repairing breaches, strengthening and raising banks, repairing regulators, etc.

Maintenance and repairs.

In addition to this Rs. 25,616 against Rs. 14,431 in the year 1916-17, were spent from the "Agricultural fund" on maintenance of rest-houses and embankments.

4. The season was an abnormal one. The rivers Indus and Chenab were exceptionally low until the middle of June and canals opened late with poor supplies. A short exceptionally heavy flood then occurred forcing the local canal officers to breach bunds and cut banks to dispose of surplus water. When this subsided the rivers again dropped much below their normal levels and continued so till early in August. A few timely showers during this period helped the crops considerably, and it is satisfactory to note that the irrigation recorded to the end of July was actually higher than that of any previous year. During August and September rainfall was phenomenal all over the District, being nearly 4 times the normal. This was accompanied by exceptional floods in both rivers and the demand for irrigation ceased. Much damage was done to crops and buildings all over the District. By the middle of September all irrigated land, except the very highest portions, was under water and communication except along flood embankments and banks of channels was impossible. An exceptionally heavy flood in the Chenab during September caused no damage except in the south of the Alipur Tahsil, which is not protected from floods, and the spill water extended right across the District to the Indus flood embankment.

Nature of season and state of demand and supply.
Kharif 1917.
Rabi 1917-18.

The following statement gives the periods during which canals were in flow :—

Name of canal.	DATES OF		Number of days canal was in flow.
	Opening.	Closing.	
Kot Sultan	6th May 1917 ...	16th October 1917 ...	163
Magassan	8th May 1917 ...	15th October 1917 ...	161
Maggi	5th May 1917 ...	15th October 1917 ...	164
Ghutta	15th May 1917 ...	15th October 1917 ...	153
Paran	14th May 1917 ...	13th October 1917 ...	153
Suleman	15th April 1917 ...	27th October 1917 ...	196
Karam	3rd June 1917 ...	8th October 1917 ...	127
Ganesh	6th June 1917 ...	18th October 1917 ...	132
Taliri	20th May 1917 ...	15th October 1917 ...	145

Area irrigated.
Kharif 1917.
Rabi 1917-18.

5. The following statement compares the area matured during 1917-18 with the average of the previous triennium :—

Season.	AVERAGE FOR 3 YEARS ENDING 1916-17.			1917-18.		
	Matured area.	Failed area.	Percentage of Kharaba.	Matured area.	Failed area.	Percentage of Kharaba.
	Acres.	Acres.		Acres.	Acres.	
Kharif	133,635	10,498	12.7	123,013	31,635	10.7
Rabi	215,618	16,081	6.9	201,096	23,431	10.4
Total	349,253	26,579	9.2	324,109	55,066	14.3

The area matured was smaller than the average of the previous triennium due to the high percentage of failed area attributable to flooding and rise of sub-soil water caused by heavy rain in August and September 1917.

5. The total revenue amounted to Rs. 6,99,691 against Rs. 7,53,898 in 1916-17, and the working expenses to Rs. 3,35,243 against Rs. 3,51,426. The net revenue amounted to Rs. 3,64,448 against Rs. 4,02,472 in the preceding year, and an average of Rs. 3,13,213 in the previous triennium.

Financial results based on collections.
Kharif 1917.
Rabi 1916-17.

The uncollected balance of assessment of occupier's rate amounted to Rs. 21,453 against Rs. 2,720 of last year. The excess is attributed to the fact of the *lambardars* having been busily employed on recruiting work.

6. The year was an unfortunate one as regards weather but results are better than might have been expected considering the adverse conditions which prevailed. The total area irrigated was the 3rd largest on record.

General remarks.

The need of greater escape capacity and better control on all canals was felt throughout the flow season.

The excellent results up to the end of July in spite of adverse conditions again emphasise the improvement of distribution brought about by replacing open cuts by pipes.

Chenab river erosion led to the construction of a diversion of the Karam canal and lower down in the vicinity of Khangarh a retired flood embankment had to be constructed owing to river encroachment which threatened to penetrate the advanced embankment.

Erosion by the river Indus necessitated the excavation of a new feeder channel for the Ghutta canal.

No works of any magnitude are contemplated at the present time in pursuance of the policy of economy during the war.

The abnormal rainfall and flooding of the District was unfortunately followed by a severe epidemic of malaria in the autumn which resulted in some temporary dislocation of work. Heavy rainfall in these normally dry districts is by no means an unmixed blessing.

SHAHPUR (PROVINCIAL) INUNDATION CANALS.

(SUPERINTENDING ENGINEER—MR. W. P. SANGSTER, C.I.E.)

Capital account.
Kharif 1917.
Rabi 1917-18.

1. No capital account is kept for these canals.

Extension and improvements.

2. No expenditure was incurred.

3. The expenditure of Rs. 13,003 against Rs. 26,168 in the previous year was incurred on the usual maintenance and repairs and silt clearances. The corresponding expenditure during preceding 23 years averaged Rs. 14,747 per annum.

Nature of season and state of demand and supply.
Kharif 1917.
Rabi 1917-18.

4. The rainfall was 26.48 inches (*kharif* 21.63 inches and *rabi* 4.85 inches) against 20.08 inches in the preceding year.

The canals were opened during May 1917, and closed in September 1917. They worked satisfactorily during the *kharif*. The dates of opening and closing the canals were as follows:—

	Date of opening.	Date of closing.
Raniwah ...	2nd May 1917	20th September 1917.
Corbynwah ...	12th May 1917	23rd September 1917.

The corresponding dates of opening and closing averaged over the preceding 23 years were as follows:—

	Date of opening.	Date of closing.
Raniwah ...	7th April 1917	10th September 1917.
Corbynwah ...	6th April 1917	26th August 1917.

The Raniwah opened 25 days later and closed 10 days later than the average dates of the past and the Corbynwah opened about 5 weeks later and closed a month later than the past average.

Area irrigated.
Kharif 1917.
Rabi 1917-18.

5. The irrigation of the year compares as follows with the averages of the two previous triennia:—

Season.				AVERAGE FOR THREE YEARS ENDING		1917-18.
				1913-14.	1916-17.	
				Acres.	Acres.	Acres.
Kharif	...	...	...	18,500	10,409	14,988
Rabi	...	...	...	9,276	16,477	10,097
Total				27,786	26,886	25,085

The area successfully matured and assessed was 23,645 acres against 25,677 acres of the preceding triennium. The decrease was due to heavy rains during August and September 1917 which enabled the zamindars to dispense with canal water for *rabi* to a large extent.

The revenue was remitted on 524 acres due to bad germination and besides this 916 acres were remitted under tenancy rules.

Financial results based on collections.
Kharif 1917.
Rabi 1916-17.

6. The gross revenue realized amounted to Rs. 68,433. Details compare as follows with the average of the previous triennium :—

Details.				Average for triennium ending 1916-17.	Year 1917-18.
				Rs.	Rs.
Total assessments (direct and indirect)	...	...	...	51,915	49,855
Receipts (direct and indirect)	...	...	...	46,653	68,433
Working expenses	...	...	...	43,549	47,607
Net revenue	...	...	...	3,110	20,826

There was a net profit of Rs. 20,826 on direct and indirect receipts which was due to a large increase of 16,366 acres in the figures of area, assessment on which was collected during the year, as compared with the average of the triennium ending 1916-17.

A scheme for linking up the Raniwah canal with the Shahpur branch has been taken in hand this year. The Corbyn-wah is a small channel which principally irrigates pasture land most of which is free of revenue.

General remarks :

SIMLA :

W. F. HOLMS,

The 10th October 1918.

Chief Engineer, Irrigation Works, Punjab.

GOVERNMENT OF THE PUNJAB.
PUBLIC WORKS DEPARTMENT.

IRRIGATION BRANCH.

Part II.

STATISTICAL STATEMENTS FOR THE YEAR 1917-18.

TABLE OF CONTENTS.

	PAGE.
I A. Statement of Canals in the Punjab	2—3
I B. Capital Account of the Irrigation Works in the Punjab Province for, and to end of, 1917-18	4
I C. Statement showing Financial Results of Irrigation Works in the Punjab for the year ending 31st March 1918	5—7
II C. Statement showing the Financial Results of Irrigation Works in the Punjab Province for, and up to the end of, 1917-18	8—9
III C. Demands and Realizations, 1917-18	10
IV C. Financial Results based on Assessments	11
I D. Statement of Traffic on Canals in the Punjab during the year 1917-18	12
II D. Description and Quantities of Raft Traffic on Canals in the Punjab during the year 1917-18	13
I E. Areas irrigated on the Punjab Canals during 1917-18 with Appen- dix A showing areas on which Occupiers' Rates were remitted	14—19
II E. Incidence of Working Expenses and Assessed Water Revenue during 1917-18	20
III E. Quantity and Value of Crops irrigated during 1917-18	21—25
IV E. Comparative Statement of Irrigation and Rainfall during 1916-17 and 1917-18	26 27
I F. Statement showing Occupier's Rate in force on the Canals in the Punjab during 1917-18	28—40

STATEMENT OF CANALS

MAJOR IRRIGATION

PARTICULARS,		MAJOR IRRIGATION							
		Western Jumna Canal including Sirsi Branch, British and Patula	SIRSI CANAL		Upper Bari Canal	Lower Bari Canal	Upper Chenab Canal	Lower Chenab Canal	
			British	Patula, Nabha and Sirsi					
I		2	3	4	5	6	7	8	
Source of supply		Jumna	Satlej		Ravi	Ravi and Chenab	Chenab	Chenab	
Minimum discharge of river.	Ever recorded, cubic feet per second	2,167	2,780		1,272	100	3,884	3,884	
	During the year	2,264	3,821		1,970	100	5,647	4,032	
Maximum discharge of canal	As designed	6,178	3,810	2,160	5,000	6,750	11,712	8,813	
	Now authorized	6,480	5,101	3,040	6,700	6,750	11,671	10,730	
	During the year	6,131	7,101		6,699	4,376	10,640	10,056	
Average annual rainfall		inches	(a) 39.83	(b) 17.12	(b) 13.90	(a) 24.71	(d) 27.0	(e) 19.11	(c) 16.1
Gross area commanded		Acres	2,735,268	2,568,182	1,051,760	1,782,560	1,571,918	1,612,720	3,383,808
Culturable area commanded		"	2,315,077	2,278,467	1,629,600	1,591,346	1,307,570	1,532,112	2,580,965
Area proposed to be irrigated annually.	By complete project	"	893,555	763,412	400,000	821,665	871,390	647,622	1,500,000
	At present	"	893,555	770,600	420,000	821,600	793,117	697,656	1,726,380
Sanctioned Estimate—									
Direct charges		Rs.	1,05,74,209	2,29,13,999	1,14,67,177	1,57,23,565	2,16,69,910	3,61,31,583	2,56,84,175
Indirect charges		"	7,50,277	12,73,126			6,78,162	12,25,441	9,31,791
Interest during construction		"	31,27,795	87,07,690			34,21,917	71,63,508	60,50,277
Total Estimate		"	1,44,52,281	3,29,00,805	1,14,67,177	1,57,23,565	2,57,69,989	4,45,16,532	3,26,66,143
Expenditure to end of 1917-18.	Direct charges	"	1,80,42,790	2,41,19,219	1,13,21,257	2,10,91,025	2,10,91,985	3,17,79,816	3,17,39,439
	Indirect charges	"	8,10,217	12,12,161		7,48,255	1,66,765	9,95,760	7,79,132
	Interest during construction	"	32,08,961	85,15,401		1,04,97,039	39,00,549	81,01,216	64,52,313
Total Expenditure		"	2,20,61,968	3,41,76,781	1,13,21,257	3,23,36,319	2,60,52,199	4,08,76,822	3,89,70,884
Works as now sanctioned—									
Main Canals, irrigation		Miles	82	39	30	182	172	40	
Branch Canals		"	213	279	219	205		357	
Branch Feeder Canals		"				16			
Lower Chautang Nala Canal		"							
Distributaries, irrigation		"	1,811	1,591	1,821	1,561	1,103	1,143	2,229
Lower Chautang Nala Canal Distributaries		"	45						
Of above—									
Navigable Channels		"	121	92	16				
Works completed to end of 1917-18—									
Main Canals, irrigation		"	82	39	30	182	172	40	
Branch Canals		"	213	279	219	205		357	
Branch Feeder Canals		"				16			
Lower Chautang Nala Canal		"	4						
Distributaries, irrigation		"	1,811	1,591	1,821	1,561	1,103	1,143	2,229
Lower Chautang Nala Canal Distributaries		"	45						
Of above—									
Navigable Channels		"	121	92	16				

Note.—Data shown in this statement

*Salampur and

†Includes 4 miles

- (a) Average rainfall for the last 39 years
 (b) Ditto ditto 34 do
 (c) Ditto ditto 23 do
 (d) Ditto ditto 16 do
 (e) Ditto ditto 11 do

A.
IN THE PUNJAB.

WORKS.				MINOR IRRIGATION WORKS.							
Upper Jhelum Canal.	Lower Jhelum Canal.	Upper Sutlej Canals.	Sidhani Canals.	Indus Irrigation Canals.	Shahpur (Imperial) Irrigation Canals.	GHAGGAR IRRIGATION CANALS.		Lower Sutlej Irrigation Canals.	Chenab Irrigation Canals.	Muzaffargarh Irrigation Canals.	Shahpur (Provincial) Irrigation Canals.
9	10	11	12	13	14	British.	Rajpootana State.	17	18	19	20
Jhelum.	Jhelum.	Sutlej.	Ravi.	Indus	Jhelum.	Ghaggar.		Sutlej.	Chenab.	Indus Chenab.	Jhelum.
4,514	...	3,601	...	1,139	...	...	...	2,580	808	808	...
6,762	860	3,969	...	30,621	360	...	...	7,462	808	808	360
3,500	3,500	4,935	2,120	...	1,100	1,000	500	5,575	5,163	7,534	233
...	3,750	...	2,865	...	1,100	1,410	556	...	...	...	932
7,879	3,984	4,016	2,932	6,505	276	1,356	401	5,706	4,860	11,029	444
36-45	(d) 12-71	(f) 10-71	(g) 7-62	(h) 5-71	(i) 14-93	(j) 11-37	(k) 13-70	(l) 5-71	(m) 0-33	(n) 5-67	(o) 14-21
591,791	1,365,305	980,730	350,977	579,158	67,067	86,324	11,901	018,268	458,478	771,811	60,025
562,703	1,162,165	869,536	314,159	422,923	62,959	72,978	31,618	905,152	310,813	674,932	53,255
322,010	668,321	310,997	150,000	307,560	17,750	15,831	17,719	250,000	200,000	350,000	27,500
270,000	615,921	310,141	150,000	307,560	12,500	46,831	17,349	250,000	200,000	350,000	24,170
4,32,40,252	1,43,95,742	13,80,375	8,62,383	6,57,949	21,5,613	3,40,092	3,07,385	...	...	...	...
16,59,277	5,68,206	15,400	87,094	10,720	9,951	10,125	...	...	...	...	...
73,20,716	32,95,551	...	39,086	...	...	...	...	...	...	...	...
5,1,17,307	2,22,62,512	18,42,778	10,38,561	7,07,615	2,15,111	3,63,720	3,7,335	...	...	...	...
4,11,55,450	1,54,32,576	17,16,232	12,32,092	39,03,355	2,63,133	1,56,365	2,85,454	...	...	...	...
6,81,631	3,02,159	1,01,011	40,225	20,308	9,051	10,792	...	...	...	...	...
85,23,413	53,03,714	8,87,099	2,12,511	6,56,207	...	...	...	...	...	...	...
5,25,61,256	2,45,85,840	27,01,413	17,11,735	36,50,160	2,59,114	3,76,157	2,65,154	...	...	...	...
489	39	324	68	416	53	44	53	400	266	417	38
40	259	...	...	...	13	...	...	...	...	...	18
...
...
545	927	395	252	306	72	31	...	307	59	735	52
...
...
454	39	328	68	415	53	44	53	400	266	417	37
40	259	...	...	...	13	...	...	...	...	...	18
...
...
545	927	395	252	306	72	31	...	307	59	735	52
...
...

are canal miles of 5,000 feet.

Faridkot Channels.

for Blumber diversion.

(f) Average rainfall for the last 25 years.

(g) Ditto ditto 29 in.

(h) Ditto ditto 51 in.

(i) Ditto ditto 19 in.

(j) Ditto ditto 15 in.

(k) Ditto ditto 8 in.

I B.

CAPITAL ACCOUNT OF THE IRRIGATION WORKS IN THE PUNJAB PROVINCE FOR, AND
TO END OF, 1917-18.

1	DIRECT CHARGES (NOT EXPENDITURE)					Indirect charges exclusive of interest	Total charges excluding interest	Simple interest
	Works	Establishment	Tools and Plants	Carriage	Total			
2	3	4	5	6	7	8	9	
40—CAPITAL EXPENDITURE ON IRRIGATION WORKS NOT CHARGED TO REVENUE								
WESTERN JUMNA CANAL INCLUDING SIRSA BRANCH								
To end of previous year	1,31,37,859	33,24,343	2,17,920	2,13,915	1,98,83,700	8,10,210	1,76,73,748	2,31,37,029
During the year	—403	—10	—	—808	—1,224	—2	—1,226	—86,311
Contribution { To end of previous year	4,09,103	2,74,542	23,518		11,09,478		11,09,478	
During the year								
SIRINDI IRRIGATION CANAL								
To end of previous year	1,74,40,274	4,75,113	21,07,183	2,03,753	2,43,81,000	12,11,154	2,55,92,153	3,39,43,149
During the year	7,323	7,109	803	20,350	37,585	1,093	38,677	8,47,827
Contribution { To end of previous year	97,45,677	33,70,274	12,01,171		1,43,17,273	103	1,43,17,376	
During the year	2,857	881	70		3,317		3,317	
Palinda	273	72	4		319		319	
Jind	238	62	1		303		303	
UPPER BARI DOAB CANAL								
To end of previous year	1,62,10,274	31,71,778	9,18,210	4,61,237	2,11,00,938	7,37,020	2,18,37,958	3,53,71,000
During the year	10,573	5,818	10,072	—7,760	—7,710	1,235	—6,475	7,39,709
LOWER BARI DOAB CANAL								
To end of previous year	1,67,76,497	30,67,603	10,34,277	2,72,000	2,11,20,273	1,67,090	2,12,87,363	30,00,817
During the year	7,67,321	89,111	11,837	—1,1,187	7,76,712	12,676	7,89,387	7,64,916
UPPER CHENAB CANAL								
To end of previous year	2,63,69,327	41,65,773	21,07,144	7,81,600	3,13,01,637	9,61,547	3,22,63,184	61,00,216
During the year	2,79,072	83,029	1,879	1,27,609	1,18,209	18,317	4,73,472	12,00,642
LOWER CHENAB CANAL								
To end of previous year	3,58,17,329	1,17,743	7,77,515	4,78,441	3,18,78,921	7,77,698	3,26,56,619	2,87,96,610
During the year	2,27,315	21,170	1,713	—97,972	1,00,719	3,031	1,03,653	10,99,333
UPPER JHELUM CANAL								
To end of previous year	2,29,62,608	17,21,918	45,01,787	10,37,201	4,30,11,341	6,38,303	4,36,49,644	65,77,417
During the year	9,98,597	3,17,135	22,000	—64,107	11,11,296	47,570	11,59,866	16,19,773
LOWER JHELUM CANAL								
To end of previous year	1,26,11,591	21,07,609	7,89,656	77,749	1,54,33,117	3,90,721	1,58,33,838	61,63,711
During the year	2,68,873	10,877	1,361	10,730	2,80,233	2,739	2,83,011	5,41,649
UPPER SATLÉJ INUNDATION CANAL								
To end of previous year	13,76,075	2,07,105	21,657	27,977	17,18,805	1,01,091	18,19,896	22,33,183
During the year				—2,623	—2,623		—2,623	59,650
SIRINDI INUNDATION CANAL								
To end of previous year	9,45,073	2,41,817	79,027	47,661	12,95,578	90,225	13,17,403	17,27,858
During the year				—3,769	—3,769		—3,769	46,028
UPPER SATLÉJ INUNDATION CANAL								
To end of previous year	28,57,372	4,85,919	25,072	60,853	29,01,076	80,745	29,81,821	20,38,274
During the year	1,379	171	11	—3,183	—1,821	23	—1,869	1,07,777
Total Imperial { To end of previous year	16,49,89,828	3,10,43,403	1,39,19,298	45,07,917	21,41,07,141	61,18,762	22,07,16,193	16,10,65,129
During the year	21,07,043	4,24,117	40,751	—1,67,774	20,08,577	79,304	21,88,071	74,81,393
Total contribution { To end of previous year	1,06,45,748	30,06,700	13,25,822		1,54,77,767	103	1,54,77,870	
During the year	3,106	816	47		3,969		3,969	
43—MINOR WORKS AND NAVIGATION								
SHARPER CANAL								
To end of previous year	1,77,000	30,760	613		3,07,071	7,001	2,16,014	
During the year								
GHAGGAR CANAL								
To end of previous year	2,94,617	62,707	7,823		3,65,337	10,704	3,76,041	
During the year	23	5			28		28	
Contribution { To end of previous year	2,39,624	41,281	2,511		2,85,412		2,85,412	
During the year	10	2			12		12	
Total Imperial { To end of previous year	4,60,877	83,017	8,338		5,71,370	20,773	5,92,143	
During the year	21	5			23		28	
Total contribution { To end of previous year	2,39,624	41,281	2,511		2,85,412		2,85,412	
During the year	10	2			12		12	
JALALPUR CANAL								
To end of previous year	28,679	10,321	3,004		81,004	2,705	83,709	
During the year								

I C.

STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION WORKS IN
THE PUNJAB PROVINCE FOR THE YEAR ENDING 31st MARCH 1918.

STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION

REALIZATIONS UNDER THE MAIN HEADS OF

IRRIGATION.		REVENUE ACTUAL RECEIPTS.										
		IRRIGATION.				Navigation.	Plantation.	Water power.	Miscellaneous.	Total.	Refund of revenue.	Gross receipt less refunds.
		Water-rate directly paid.	Share of land revenue, sale-proceeds of waste and other lands.	Owner's rate.	Total.							
1		2	3	4	5	6	7	8	9	10	11	12
PRODUCTIVE WORKS.		Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Western Jumna Canal, including Sirra Branch.	Imperial	29,30,643	2,36,276	..	31,61,101	52,511	23,504	2,761	64,645	33,14,635	692	33,13,833
	Contribution	3,25,659	..	..	3,25,659	..	201	215	2,411	3,28,618	213	3,28,871
Sirhind Canal	Imperial	30,51,721	98,174	..	31,40,895	10,809	29,458	71,298	1,71,489	31,36,012	1,023	31,35,019
	Contribution	21,73,589	..	..	21,73,589	5,000	17,611	31,503	53,329	22,67,101	5,157	22,61,014
Upper Bari Doab Canal	..	39,68,010	7,13,343	..	46,82,204	..	44,275	1,07,823	1,02,205	10,40,897	4,467	40,42,120
Lower Bari Doab Canal	..	13,10,104	2,62,002	..	15,72,096	..	1,375	..	40,007	16,41,378	1,610	16,43,339
Upper Chenab Canal	..	10,77,311	3,63,070	..	23,10,001	..	329	..	37,410	23,49,751	3,665	23,45,089
Lower Chenab Canal	..	81,01,105	7,00,002	..	1,51,07,201	..	17,955	13,073	61,678	1,52,63,697	522	1,52,63,175
Upper Jhelum Canal	..	5,10,831	..	..	5,10,731	..	277	..	27,433	5,38,098	103	5,37,893
Lower Jhelum Canal	..	27,72,687	10,39,673	..	43,71,267	..	1,775	22,379	22,015	44,29,111	291	44,29,120
Upper Sutlej Inundation Canals	..	1,61,191	2,51,728	..	7,73,219	..	3,331	..	10,033	7,50,276	2	7,50,271
Sidhwal Canals	..	6,11,272	1,57,137	..	0,03,423	..	872	..	2,900	7,01,040	335	7,01,625
Indus Inundation Canals	..	1,59,107	2,40,659	..	2,25,037	..	6,097	..	60,867	4,41,731	41	4,41,690
TOTAL	Imperial	2,60,00,514	1,06,78,719	..	3,66,84,433	63,510	1,41,637	2,50,675	7,01,601	3,78,15,297	12,391	3,78,03,285
	Contribution	21,99,217	..	..	21,99,217	5,800	12,342	31,777	43,773	25,05,919	5,491	25,00,519
WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT.												
Lower Salke Inundation Canals	..	3,33,006	3,27,853	..	6,65,859	..	3,453	..	1,009	6,72,000	810	6,65,191
Muzaffargarh Inundation Canals	..	2,93,609	3,01,018	..	6,50,825	..	14,875	..	4,375	6,70,091	..	6,69,691
Chenab Inundation Canals	..	2,17,043	3,01,755	..	5,22,589	..	10,532	..	1,514	5,43,311	218	5,42,126
TOTAL	..	8,37,519	10,29,811	..	18,06,372	..	38,793	..	7,870	19,11,025	731	19,10,301
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.												
Shahpur Canal	..	06,160	10,393	..	1,35,551	..	..	..	..	2,35,551	..	1,35,551
Ghaggar Canal	Imperial	22,610	..	..	22,610	..	..	..	..	22,610	..	22,610
	Contribution	17,457	..	..	17,457	..	..	..	415	17,872	..	17,872
TOTAL	Imperial	1,17,735	40,893	..	1,58,133	..	..	..	..	1,68,133	..	1,58,133
	Contribution	17,457	..	..	17,457	..	..	..	415	17,872	..	17,872
PROVINCIAL.												
Shahpur Canal	..	49,601	10,032	..	68,433	..	..	..	..	68,433	..	68,433
Bari Inundation Canals	..	..	-1,778	..	-1,778	..	..	..	..	-1,778	..	-1,778
TOTAL	..	49,601	18,180	..	66,657	..	..	..	..	66,657	..	66,657

(a) Includes Rs. 1,434 credited to Punjab State through (b) and (c) include Rs. 22,120 and Rs. 21,617, respectively (d) Includes Rs. 63,097 passed through the Administrative (e) Includes Rs. 3,79,001, Rs. 72,000 and Rs. 20,230 spent (f) These figures have been reported by the Director State. (g) Includes Rs. 2,306 (h) " " Rs. 1,314 (i) " " Rs. 7

C.

WORKS IN THE PUNJAB PROVINCE FOR THE YEAR ENDING 31st MARCH 1918.
REVENUE AND WORKING EXPENDITURE.

REVENUE AND WORKING EXPENSES.																				
MAINTENANCE OF WORKS.																			Grand Total Working Expenses.	Net Revenue.
ESTABLISHMENT REVENUE.					ESTABLISHMENT.				Works.	Repairs.	Sanities.	Tools and Plants.	Plantation.	Total cost of maintenance.	Total direct charges.	Indirect charges.				
Direction.	Executive.	Navigation.	Civil Officers.	Total.	Direction.	Executive.	Medical.	Total.												
12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Rs.	Rs.	Rs.	Rs.	P.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
10,839	3,36,538	431	53,526	4,00,649	18,847	49,317	11,103	1,16,408	1,23,021	5,62,417	2,403	12,877	18,350	8,24,721	12,89,309	81,412	13,76,721	10,47,112		
104	278	...	...	757	6,797	(b) 71,317	...	39,111	10,077	(c) 49,418	201	456	...	1,67,727	1,69,114	...	1,69,114	2,20,460
34,047	3,17,320	208	1,01,281	1,13,078	74,296	61,766	10,701	97,473	7,179	5,12,670	...	32,723	10,017	7,22,234	11,78,259	70,233	12,48,492	21,30,527		
2,033	0,673	...	...	11,106	27,414	57,411	2,180	1,14,025	1,76,343	8,72,636	2,359	13,163	4,027	9,73,704	9,41,600	...	9,41,600	13,17,444
49,721	4,01,498	...	1,11,859	6,02,408	13,174	71,701	7,909	61,503	67,107	4,74,400	201	16,007	30,831	8,70,897	12,42,507	61,519	13,34,133	36,67,697		
32,012	2,61,051	...	37,870	3,20,781	24,077	6,729	...	1,00,703	11,712	3,76,101	...	7,171	27,217	5,22,517	8,42,313	61,513	9,13,826	7,58,432		
34,737	2,68,291	...	47,914	3,11,777	10,524	64,050	...	1,01,779	10,627	5,11,415	14,577	...	12,700	6,72,620	10,22,897	67,716	10,90,613	12,58,450		
61,101	6,09,687	...	2,44,743	9,76,177	16,422	1,00,077	21,071	1,27,173	2,05,774	6,74,602	1,332	31,081	54,739	1,47,618	23,02,740	1,67,782	21,60,611	1,28,02,661		
9,109	1,25,330	...	14,511	1,47,801	17,184	1,05,008	16,701	1,30,773	61,611	1,20,712	...	1,322	12,401	9,70,008	7,84,941	16,831	9,27,407	2,89,502		
21,176	3,13,611	...	10,077	4,13,077	6,221	44,914	12,701	60,417	12,111	7,01,610	...	18,246	12,701	4,12,611	9,45,499	60,877	9,16,565	35,13,701		
7,780	50,600	...	10,234	1,01,973	4,927	81,794	1,211	41,074	12,148	1,02,000	...	1,741	8,301	2,70,817	7,60,176	22,208	2,92,314	3,67,026		
3,789	67,771	...	6,040	73,471	870	6,042	1,721	0,102	7,700	48,100	...	2,535	5,911	77,703	1,47,107	11,673	1,58,709	5,42,626		
3,104	42,272	...	7,791	53,124	8,402	67,007	1,211	68,671	68,000	1,70,400	51	1,253	17,211	7,20,218	3,31,711	17,838	3,49,152	42,503		
1,17,517	23,47,570	779	7,44,549	79,14,722	1,00,023	5,77,778	67,609	9,62,311	7,20,671	41,74,711	19,671	80,160	2,17,021	64,61,601	1,01,00,310	5,94,735	1,11,03,851	2,60,89,411		
2,142	9,371	...	...	11,483	30,211	1,14,713	7,160	1,22,139	1,15,719	7,12,611	2,603	17,610	4,027	16,14,121	10,72,611	...	10,72,611	15,37,801
0,213	58,783	...	0,532	59,315	1,007	23,337	1,521	24,858	47,490	87,277	0,427	770	4,043	1,71,525	2,39,787	17,401	2,57,089	4,16,593		
8,170	34,681	...	7,857	69,997	11,553	76,092	...	47,667	39,759	7,63,010	7,851	1,740	10,421	7,42,173	3,18,770	10,173	3,35,243	3,61,449		
6,011	17,311	...	6,040	29,875	1,422	13,070	...	18,061	16,172	73,639	...	477	0,611	1,14,292	1,17,177	0,570	1,17,747	3,02,373		
50,915	1,21,509	...	23,723	1,45,725	20,062	73,118	1,321	61,671	69,127	3,18,475	1,427	2,001	21,909	5,74,899	7,60,032	30,433	7,17,045	11,79,286		
3,633	16,134	...	2,770	22,711	1,607	6,009	...	0,411	...	21,017	...	...	...	33,429	55,869	4,620	60,489	75,060
1,870	0,730	...	029	0,452	2,130	7,753	...	0,892	6,140	0,776	...	17	102	22,563	32,015	2,609	34,744	12,165		
...	...	...	...	...	214	(c) 2,613	...	3,127	1,290	(d) 3,292	...	(e) 51	...	7,702	7,702	...	7,702	10,110
4,493	22,803	...	3,372	31,723	3,042	14,701	...	10,713	0,146	30,157	...	47	102	70,261	69,614	7,103	68,212	62,021		
...	...	...	...	...	214	2,613	...	3,127	1,290	3,762	...	51	...	7,702	7,702	...	7,702	16,116
2,070	16,776	...	1,210	10,644	1,750	8,625	...	10,291	...	13,703	...	...	...	27,987	43,471	4,176	47,007	26,626
1,616	...	...	...	1,611	...	...	...	...	...	...	...	...	...	...	1,011	230	1,871	9,017
4,600	16,775	...	1,216	21,187	1,600	5,027	...	10,291	...	13,671	...	...	...	27,987	43,471	1,100	49,478	17,170

the Administrative Accounts of the Province,
spent by the Patiala State on maintenance of State channels,
Accounts of the Province,
by the Native States of Patiala, Nabha and Jind, respectively.

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION

No. of works.	Name of works.	GENERAL FINANCIAL RESULTS TO END OF 1917-1918.								
		Mileage in operation.		Estimated cost of construction (direct and indirect).	Date of completion of work (P.W.D. Code, if 1918).	Date when system first came into operation.	Total capital outlay (direct and indirect).	Accumulated interest.	Accumulated revenue.	Total sum-at-charge (column 7 + column 9).
		Main Canals and Branches.	Distributaries.							
1	2	3	4	5	6a	6b	7	8	9	10
		Miles.	Miles.	Rs.	Date.	Date.	Rs.	Rs.	Rs.	Rs.
		(a)	(b)				(a)			
MAJOR WORKS.										
PRODUCTIVE WORKS.										
1	Western Imperial Jumna Canal in Indrag Sira Branch.	294	1,731	1,74,95,519	1896	1823	1,76,92,529	...	3,42,30,460	1,76,92,529
	Contribution.	35	171	11,60,478	1895	1891-92	11,60,478	..	..	11,60,478
2	Sirhind Canal.	318	1,591	2,61,75,295	1896-87	1863-84	2,56,81,380	...	1,92,42,141	2,56,81,380
	Contribution.	219	1,821	1,43,18,817	...	..	1,43,21,257	...	..	1,43,21,257
3	Upper Bari Doab Canal.	311	1,377	2,14,61,111	1878-9	1860-61	2,18,32,288	...	4,35,04,979	2,18,32,288
4	Lower Bari Doab Canal.	132	1,103	2,14,47,642	31st March 1917	1913-14	2,21,61,550	35,00,978	..	2,61,22,528
5	Upper Chenab Canal	172	1,113	3,49,10,418	31st March 1917	1912-13	3,57,78,606	61,41,779	...	4,19,17,385
6	Lower Chenab Canal	427	2,229	3,25,19,012	1897-1900	1887	3,25,18,571	...	18,85,42,183	3,25,19,571
7	Upper Jhelum Canal	120	505	4,29,68,501	31st March 1917	1915-16	4,50,37,813	1,08,20,808	...	5,58,58,621
8	Lower Jhelum Canal	195	997	1,57,79,320	31st March 1917	1901	1,62,25,129	...	3,00,86,879	1,62,25,129
9	Upper Sutlej Inunda- tion Canal.	323	395	17,07,019	1858-59	1855	18,17,323	...	34,48,459	18,17,323
10	Sidhuai Canal ...	69	252	12,47,939	1886	1896	13,32,227	...	68,19,562	13,32,227
11	Indus Inundation Canals.	443	308	29,23,355	1849-50	1849	29,40,753	7,64,929	...	37,15,682
	Total { Imperial ...	2,818	11,895	21,80,07,161	...	..	22,33,05,164	2,07,94,294	29,11,61,663	21,40,99,458
	Contribution	254	1,972	1,54,70,295	..	...	1,54,81,735	...	...	1,54,81,735
WORKS FOR WHICH CAPITAL AND REVENUE ACCOUNTS ARE KEPT.										
12	Shabpar Canals ...	66	72	2,15,914	1870-71	1870	2,15,914	...	11,98,235	2,15,914
13	Ghaggar Canals. { Imperial ...	44	34	3,76,129	1898-99	1897	3,76,167	11,00,411	..	14,78,768
	Contribution.	53	...	2,85,142	...	...	2,85,454	...	...	2,85,454
	Total { Imperial ...	110	106	5,92,043	..	...	5,92,071	11,00,411	11,98,235	16,92,482
	Contribution	53	..	2,85,412	...	...	2,85,451	...	...	2,85,451
WORKS FOR WHICH REVENUE ACCOUNTS ARE KEPT.										
14	Lower Sutlej Inunda- tion Canals.	400	397	...	1895	Were in operation prior to annexation of the Punjab to British Government.	...	...	77,30,635	...
15	Muzaffargarh Inunda- tion Canals.	417	735	...	1896	...	...	...	82,91,737	...
16	Chenab Inundation Canals.	266	59	...	1895	...	...	...	72,91,520	...
	Total ...	1,083	1,191	...	...	...	...	...	2,30,17,212	...
Provincial.										
17	Shabpar Canal ...	55	59	..	1870-71	1870	...	..	2,75,686	...
18	Ravi Inundation Canal	...	...	..	...	...	...	...	...	...
	Total ...	55	59	...	...	...	...	...	2,75,686	...

(a) Includes 4 miles and (b) 45 miles of the
(c) Opened as an Inundation Canal in 1887

WORKS FOR, AND UP TO THE END OF, 1917-1918.

FINANCIAL RESULTS OF THE YEAR 1917-1918.									
Gross receipts (direct and indirect).	Working expenses (direct and indirect).	Net Revenue.	Percentage on Capital outlay, column 14.	Percentage on sum-charged, column 10.	Interest at 3-1/2% per cent. on direct Capital outlay to end of previous year, plus half the outlay of the year.	Net profit.	Net loss.	Area irrigated.	Percentage of working expenses to receipts (column 11 to column 12).
11	12	13	14	15	16	17	18	19	20
Rs.	Rs.	Rs.	%	%	Rs.	Rs.	Rs.	Acres.	%
33,18,853	12,70,721	19,13,112	10.02	10.08	5,66,811	13,56,768	...	670,413	41.36
1,431	63,673	-62,192	-7.06	-6.70	...	...	62,192	74,012	4,137.44
31,25,019	12,54,192	21,84,627	8.51	8.53	5,47,427	13,33,100	...	551,534	36.52
63,137	505,374	-442,277	-3.09	-3.19	...	...	4,42,277	389,169	80.91
43,12,130	13,24,131	16,07,997	16.52	16.52	7,92,700	28,76,291	...	1,111,521	26.99
19,43,557	9,13,556	7,29,192	3.21	2.81	7,53,004	...	21,416	621,000	55.60
23,45,000	10,56,013	12,58,107	3.52	3.00	12,00,612	57,514	...	3,2,005	40.33
1,52,63,175	21,00,511	1,28,02,664	39.37	39.37	10,09,523	1,17,03,111	...	2,277,125	16.12
6,87,094	9,27,000	-1,84,502	-0.61	-0.52	15,13,669	...	18,09,167	177,105	153.11
41,23,110	9,16,565	35,13,394	21.57	21.67	5,11,846	29,08,618	...	775,370	20.67
7,69,174	3,82,311	3,77,863	20.21	20.21	79,050	3,08,270	...	137,557	50.95
7,61,625	1,58,709	5,12,916	40.75	40.75	4,40,299	1,67,018	...	318,112	22.60
4,41,690	8,93,182	12,700	1.42	1.13	1,00,767	...	58,219	201,213	9.30
5,78,03,125	1,11,53,551	2,50,93,411	11.05	10.91	71,41,792	2,11,00,470	18,65,830	5,591,216	29.37
51,631	5,69,607	-2,61,476	3.26	-3.21	...	1,02,15,030	6,04,176	1,55,072	841.75
1,55,554	60,199	75,656	81.77	31.77	7,162	67,931	...	32,073	11.61
22,549	31,714	-12,165	-3.23	-4.2	12,688	...	21,873	21,823	15.31
...	4,135	-4,135	-1.11	-1.14	...	...	4,135	8,671	...
1,75,123	85,212	92,021	10.61	8.71	19,940	67,031	-21,153	64,456	60.21
...	4,135	-4,135	-1.11	-1.14	...	...	4,135	8,671	...
6,68,181	2,52,009	4,16,895	...	...	...	1,16,595	...	3,65,181	37.71
6,69,691	3,36,213	3,64,419	...	...	...	3,61,418	...	3,86,076	47.91
5,42,189	1,49,763	3,92,073	...	...	...	3,02,379	...	2,29,012	37.62
10,10,301	7,37,695	11,73,216	...	...	...	11,73,216	...	9,79,801	34.68
6,433	47,047	20,520	...	...	...	20,826	...	25,086	69.50
-1,776	1,571	-3,617	...	...	...	...	-3,617	...	...
65,657	49,475	17,179	...	...	...	20,520	-3,617	25,086	74.22

Lower Chaurang Nala Canal,
and as a Perennial Canal in 1923.

III C.

STATEMENT SHOWING DEMANDS AND REALIZATIONS IN THE PUNJAB PROVINCE
FOR THE YEAR 1917-18.

Name of Canal	Balance of demands remaining unutilized at the commencement of the year.	Demands during the year.	Total.	Deducted remissions not including cash refunds.	Net amount.	Actual realization.	Amount unutilized at the close of the year.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
XXIX—MAJOR WORKS—							
DIRECT RECEIPTS.							
<i>Water or occupier's rates.</i>							
Western Jumna Canal ...	9,777	31,09,660	31,19,433	1,09,801	30,09,642	29,30,833	78,751
Sirhind Canal ...	23,398	31,24,969	31,48,067	37,797	30,90,270	30,51,721	38,549
Upper Bari Doab Canal ...	15,012	44,17,737	42,28,649	3,01,073	33,28,676	33,46,707	36,969
Lower Bari Doab Canal ...	1,864	19,02,259	19,01,123	6,37,657	12,66,466	12,51,026	15,440
Upper Chenab Canal ...	39,043	22,71,310	23,10,362	2,41,832	20,68,430	19,57,311	1,03,129
Lower Chenab Canal ...	3,455	55,09,353	57,12,868	42,496	51,70,872	54,61,199	5,673
Upper Jhelum Canal ...	1,806	6,21,063	6,23,869	1,13,776	5,10,094	5,10,331	1,703
Lower Jhelum Canal ...	5,258	27,36,265	27,41,523	2,731	27,38,792	27,32,635	6,167
Upper Sutlej Inundation Canals	6,869	4,89,630	4,96,499	4,513	4,91,986	4,84,491	7,465
Siddhni Inundation Canals	3,128	5,39,511	5,42,612	94	5,42,518	5,41,271	1,277
Indus Inundation Canals	73,483	1,43,093	2,21,586	4,906	2,16,620	(a) 1,81,395	32,225
Total occupier's rates ...	1,83,723	2,70,67,903	2,78,51,631	15,24,215	2,63,37,416	2,59,92,005	3,35,411
<i>Owner's rate.</i>							
Lower Chenab Canal ...	17,917	7,130	25,047	17,919	7,123	7,123	...
XXX—MINOR WORKS AND NAVIGATION.							
<i>(Imperial).</i>							
Lower Sutlej Inundation Canals ...	67	3,13,656	3,10,723	37	3,10,686	3,02,754	932
Muzaffargarh Inundation Canals	2,713	3,02,367	3,05,086	25	3,05,031	2,83,608	21,453
Chenab Inundation Canals ...	3,853	2,19,261	2,23,119	...	2,23,119	2,17,913	5,176
Hajiwab Canal ...	...	26,297	26,297	...	26,297	26,243	54
Shahpur Inundation Canals ...	—10	1,04,518	1,04,508	9,323	95,185	95,184	—1
Ghaggar Inundation Canals ...	33	21,581	24,514	2,065	22,549	22,549	...
Total ...	6,607	9,87,690	9,91,317	11,450	9,82,897	9,55,293	27,614
PROVINCIAL.							
Shahpur Canal ...	—4	48,931	48,980	394	48,586	48,501	85
Ravi Canal ...	...	...	...	...	...	...	...
Total ...	—4	48,931	48,980	394	48,586	48,501	85

(a) Includes Rs 56,193 on account of Dhundi Estate.

IV C.

STATEMENT SHOWING THE FINANCIAL RESULTS OF THE IRRIGATION WORKS IN THE PUNJAB PROVINCE FOR THE YEAR 1917-18 BASED ON ASSESSMENTS OF THE YEAR 1917-18 AND FINANCIAL RESULTS OF THE OPERATIONS FOR THE YEAR ENDING 31st MARCH 1918.

IRRIGATION WORKS.	Capital outlay, Direct and Indirect, to the end of the year 1917-18.	REVENUE ASSESSED DURING THE YEAR.										Working expenses, Direct and Indirect.	Net assessed Revenue of the year.	Percentage on capital outlay to end of the year.	
		DIRECT ASSESSED REVENUE.								Indirect receipts.	Grand Total.				
		Occupier's rate.	Owner's rate.	Plantation.	Water towers.	Navigation.	Miscellaneous.	Total.							
1	2	3	4	5	6	7	8	9	10	11	12	13	14		
PRODUCTIVE WORKS.															
Western Jumna Canal (Imperial ...)	1,26,51,721	2,55,500	...	...	2,501	12,711	64,777	5,00,551	2,37,256	30,31,677	13,70,721	17,00,576	961		
... (Contributions ...)	11,71,178	1,07,484	...	...	...	...	2,411	2,60,004	...	5,00,571	1,78,114	1,02,630	16,69		
Ghaghara Canal	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Imperial ...)	1,37,51,721	2,55,500	...	...	2,501	12,711	64,777	5,00,551	2,37,256	30,31,677	13,70,721	17,00,576	961		
... (Contributions ...)	1,11,71,178	1,07,484	...	...	...	...	2,411	2,60,004	...	5,00,571	1,78,114	1,02,630	16,69		
Upper Bari Doab Canal	2,15,22,257	17,04,8	...	...	41,277	1,72,727	...	1,72,727	10,57,694	1,13,346	15,67,036	13,53,171	11,31,523	15,73	
Lower Bari Doab Canal	2,24,01,750	17,07,702	...	...	1,776	...	...	...	10,18,101	2,82,702	21,01,104	9,17,576	11,57,339	6,22	
Upper Ghaghara Canal	2,25,15,177	2,25,15,177	...	...	...	...	...	...	27,410	20,47,410	5,03,677	27,50,086	16,67,613	14,61,613	4,91
Lower Ghaghara Canal	2,25,15,177	2,25,15,177	...	...	...	...	...	...	61,576	62,10,601	17,04,121	1,07,04,721	21,00,711	1,07,04,721	42,43
Upper Jhelum Canal	1,00,22,427	7,71,421	...	...	...	...	...	...	27,694	7,71,421	1,11,721	11,42,610	9,27,120	3,15,421	6,70
Lower Jhelum Canal	1,00,22,427	7,71,421	...	...	...	...	...	...	32,712	10,00,000	10,00,000	45,00,000	9,15,000	10,00,000	10,53
Upper Ravi Irrigation Canal	1,07,71,721	1,07,71,721	...	...	...	...	...	...	10,772	1,07,71,721	2,11,715	8,76,201	3,55,714	4,17,500	21,07
Lower Ravi Irrigation Canal	1,07,71,721	1,07,71,721	...	...	...	...	...	...	1,07,71,721	1,07,71,721	1,07,71,721	1,07,71,721	1,07,71,721	1,07,71,721	4,76
Lower Sutlej Irrigation Canal	21,57,721	1,11,417	...	...	...	...	...	...	2,712	1,11,417	2,49,810	4,01,210	3,00,112	2,271	0,70
Totals	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Imperial ...)	1,37,51,721	2,55,500	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Contributions ...)	1,11,71,178	1,07,484	...	...	...	...	...	...	...	...	...	...	...	...	...
WATER FOR WHICH CAPITAL AND REVENUE ASSESSMENT ARE MADE.															
Salween Canal	2,17,114	17,176	...	...	...	...	...	...	10,176	2,17,114	1,17,114	10,176	10,176	10,176	...
Ghaghara Canal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Imperial ...)	2,17,114	17,176	...	...	...	...	...	...	10,176	...	10,176	10,176	10,176	10,176	4,97
... (Contributions ...)	2,17,114	17,176	...	...	...	...	...	...	10,176	...	10,176	10,176	10,176	10,176	2,74
Totals	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Imperial ...)	2,17,114	17,176	...	...	...	...	...	...	10,176	...	10,176	10,176	10,176	10,176	8,70
... (Contributions ...)	2,17,114	17,176	...	...	...	...	...	...	10,176	...	10,176	10,176	10,176	10,176	3,51
WATER FOR WHICH ONLY REVENUE ASSESSMENT HAS BEEN MADE.															
Lower Ravi Irrigation Canal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chandigarh Irrigation Canal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sharda Irrigation Canal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Imperial ...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Contributions ...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
PROVINCIAL WORKS FOR WHICH ONLY REVENUE ASSESSMENT HAS BEEN MADE.															
Salween Canal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ravi Irrigation Canal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Imperial ...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
... (Contributions ...)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Figures reported by the Indian State.
 * Includes Rs. 3,000 spent by the Indian State.

STATEMENT OF TRAFFIC ON CANALS IN THE PUNJAB DURING THE YEAR 1917-18.

Particulars.	Western Jumna Canal.	Sirhind Canal.
Length of Channel open for navigation .. Miles	121	138
Receipts—		
Tollage on private boats ... Rs.	111	2,104
" " Government boats ... "	...	...
" " rafts ... "	5,430	14,801
Carrying operations or transport service—		
Hire of Government boats ... "	...	...
Refund of revenue ... "	...	—6
Total receipts ... "	52,511	16,899
Maintenance charges, including special Navigation Establishment ... "	5,644	7,553
Net revenue of year ... "	46,897	9,346
Total number of boats plying cargo ...	...	...
" " " " passengers ...	...	...
Total registered tonnage cargo ...	...	...
" " " " passengers ...	...	...
Ton mileage, Up (a) ...	...	...
Down ...	...	...
Total ...	...	...
Estimated value of cargoes, Up (a) ... Rs.	...	...
" " " Down ... "	...	...
Total ... "	...	...
Number of passengers ...	...	16,359
Rafts, Up ... Q. ft.	...	...
" Down ... "	2,253,450	15,73,107
Total ... "	2,253,450	1,573,107
Estimated value of rafts ... Rs.	26,28,676	11,17,313
Tollage on boats per ton per mile (a) ...	...	...
" " rafts per 100 c. ft. ...	2.32	0.94

(v) Details of boat traffic are not recorded (Government of India, Public Works Department, No. 72-I, dated 22nd April 1893).

II D.

DESCRIPTION AND QUANTITIES OF RAFT TRAFFIC ON CANALS IN THE PUNJAB DURING THE YEAR 1917-18.

Particulars.	WESTERN JUMNA CANAL.						SIRHIND CANAL.						TOTAL.					
	TOTAL.			PRIVATE.			TOTAL.			PRIVATE.			TOTAL.			PRIVATE.		
	Quantity in tons.			Value.			Quantity in tons.			Value.			Quantity in tons.			Value.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	Up.	Down.	Total.	Ra.	Tons.	Ra.	Up.	Down.	Total.	Ra.	Tons.	Ra.	Up.	Down.	Total.	Ra.	Tons.	Ra.
Timber in logs, round and squared	...	75	75	1,100	75	4,480	...	790	790	63,385	659	13,575	...	574	574	58,015	731	19,035
Steeple, broad gauge	...	30,032	30,032	17,78,800	30,032	17,78,800	...	23,162	23,162	5,68,229	27,753	9,51,016	...	53,214	53,214	26,47,089	32,335	26,32,870
" metre "	...	5,717	5,717	3,36,731	5,717	3,36,731	...	2,887	2,887	75,787	2,816	73,899	...	5,604	5,604	4,11,808	1,532	4,09,919
Scantlings	...	7,203	7,203	5,09,335	7,203	5,09,335	...	2,307	2,307	1,18,756	2,246	1,15,631	...	9,510	9,510	6,28,091	9,449	6,25,016
Bamboos and reeds	63	63	956	63	956	...	63	63	956	63	956
Firewood
Total	...	43,047	43,047	26,28,576	43,047	26,28,576	...	29,219	29,218	11,77,313	29,563	10,68,128	...	72,285	72,285	37,45,989	71,610	37,16,803

STATEMENT OF AREAS IRRIGATED BY IRRIGATION WORKS IN THE PUNJAB DURING THE YEAR 1917-18.

NAMES OF CANALS.	NUMBER OF DAYS CANAL WAS IN FLOW.		AREA IRRIGATED, IN ACRES.										AVERAGE DISCHARGE, IN CUSECS.				AREA IRRIGATED, PER CUSEC.				
	Kharif.	Rabi.	KHARIF.		RABI.		TOTAL.		Flow.	Lift.	DOUBLE CROPPED.		AT HEAD less VOLUME ISAPED.		AT DISTRIBUTARY HEADS.		AT HEAD less VOLUME CAPED.		AT DISTRIBUTARY HEADS.		
			Irrigated.	Assessed.	Irrigated.	Assessed.	Irrigated.	Assessed.			Area irrigated.	Percent- age of area irrigated.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	Rabi.	
																					4	5	6	7	8	9	10	11	12	13
1																					
Major Irrigation Works.																					
Western Jumna Canal (including Siron Branch, British and Patiala).	148	1155	373,102	317,564	352,223	317,185	735,325	614,740	717,292	8,093	135,280	17-27.	3,470	2,272	2,893	1,774	106	156	129	139	
" " (Patiala, Nabha and Jind States).	105	1119	207,436	202,320	314,209	335,876	531,731	311,195	549,590	2,149	1,4701	19-00	3,393	2,177	1,944	1,807	87	133	104	184	
Upper Bari Doab Canal "	101	1179	163,309	167,351	211,702	211,729	350,160	370,030	178,335	1,775	103,061	27-35	2,542	1,456	2,248	1,405	66	145	75	151	
Lower Bari Doab Canal "	157	1168	293,350	174,227	325,071	249,817	621,600	4,21,074	600,719	20,581	14,207	22-8	3,452	3,084	2,707	2,398	87	105	167	136	
Upper Chenab Canal "	158	1153	245,110	232,956	137,895	130,739	352,035	3,4,195	379,991	2,914	10,176	2-63	3,895	1,535	2,738	1,337	86	90	90	103	
Lower Chenab Canal "	137	1162	727,291	723,326	1,519,844	1,611,939	2,377,125	2,355,215	2,212,210	3,915	161,230	7-08	7,700	7,873	6,645	6,928	95	197	111	244	
Upper Jhelum Canal "	115	1167	67,208	65,980	102,798	107,165	177,093	173,055	177,066	...	1,712	0-09	1,103	1,030	1,225	930	61	106	65	119	
Lower Jhelum Canal "	155	1142	331,872	228,719	533,608	523,063	765,470	751,722	763,060	1,891	9,263	1-21	2,653	2,979	2,304	2,765	91	179	101	194	
Upper Sutlej Canals "	174	...	189,000	183,071	247,937	247,937	373,957	331,029	333,062	3,895	41,539	9-19	1,615	1,415	1,415	1,515	180	...	180	...	
Sidmal Canals "	85	1100	131,207	101,937	187,233	171,637	318,113	270,691	311,512	6,930	2,230	0-70	1,415	...	...	...	225	...	225	...
Indus Inundation Canals	128	...	110,012	86,619	61,171	51,411	504,213	141,003	195,565	3,368	6,863	3-36	3,782	...	...	...	54	...	54	...
Total	...	...	3,333,822	3,077,296	4,652,586	4,507,029	7,986,389	7,515,651	...	50	...	...	...	...	...	...	201	...	201	...
Minor Irrigation Works.																					
Shahpur (Imperial) Inundation Canals	98	...	17,618	17,459	24,945	22,059	12,633	39,518	12,593	...	...	...	...	...	...	...	212	...	212	...
Ghaggar Inundation Canals (Raj-Kh)	81	42	9,603	9,570	12,229	11,769	21,323	21,323	21,323	...	...	...	...	...	...	...	544	...	40	...
" " (Bikaner)	...	...	1,577	1,602	9,994	2,119	8,071	7,081	8,071	...	...	...	...	...	...	...	290	...	30	...
Lower Sutlej Inundation Canals	137	57	161,921	115,367	203,363	188,012	365,184	302,029	317,335	17,310	73	0-02	2,725	...	...	...	131	...	134	...
Chenab Inundation Canals	128	28	97,141	76,113	131,598	122,176	239,012	197,249	220,221	2,891	1,610	0-7	2,101	...	...	...	109	...	109	...
Muzaffargarh Inundation Canals	140	15	160,518	128,913	224,527	201,090	355,075	300,009	381,513	3,503	43,438	11-8	5,503	...	...	...	68	...	68	...
Shahpur (Provincial) Inundation Canals	110	...	14,058	14,414	10,097	9,201	25,085	23,615	25,085	...	11	0-04	313	...	...	...	80	...	80	...
Total	...	...	403,729	363,728	613,781	569,312	1,077,513	922,070	...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX A TO STATEMENT I E.

STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED DURING THE YEAR 1917-18.

CAUSE OF REMISSION.	Kharif, 1917.				Rabi, 1917-18.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1.	2.	3.	4.	5.	6.	7.	8.	9.
WESTERN JUMNA CANAL.								
1. Wrong assessment	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
2. Escape irrigation	...	38	...	...	...	82	...	...
3. Under Tenancy Rules
4. Short supply	...	40	...	...	...	94	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain	...	21,043	...	...	...	4,431	...	...
{ (b) from canal	...	10	...	...	...	3	...	...
9. Rats
10. Locusts	...	43	...	...	...	...	...	...
11. Other insects and blight	...	672	...	...	...	1	...	...
12. Bad germination or cultivation	...	48	...	...	...	155	...	...
13. Bad soil	15	...	...
14. High land
15. Miscellaneous	...	64	...	...	...	255	...	...
Total	317,544	(A) 25,539	378,102	6.81	317,185	(A) 5,038	352,223	1.43
SIRIND CANAL (IMPERIAL).								
1. Wrong assessment	4	...	...
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	...	10	...	...	...	187	...	...
5. Hail	...	201	...	...	...	4,006	...	...
6. Frost	22	...	...
7. High wind
8. Flooding { (a) by heavy rain	...	2,310	...	...	...	45	...	...
{ (b) from canal	...	12	...	...	...	15	...	...
9. Rats
10. Locusts	...	20	...	...	...	...	...	...
11. Other insects and blight	...	1,910	...	...	...	12	...	...
12. Bad germination or cultivation	...	14	...	...	...	28	...	...
13. Bad soil	2	...	...
14. High land
15. Miscellaneous	...	665	...	...	...	903	...	...
Total	202,320	5,115	207,435	2.40	338,575	5,424	344,299	1.58
UPPER BARI DOAB CANAL.								
1. Wrong assessment	...	11	...	...	...	57	...	...
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	190	...	...
5. Hail	399	...	...
6. Frost	114	...	...
7. High wind	73	...	...
8. Flooding { (a) by heavy rain	...	61,089	...	...	...	521	...	...
{ (b) from canal	83	...	...
9. Rats
10. Locusts	...	133	...	...	...	...	...	...
11. Other insects and blight	...	146	...	...	...	33	...	...
12. Bad germination or cultivation	...	5	...	...	...	331	...	...
13. Bad soil	55	...	...
14. High land
15. Miscellaneous	...	702	...	...	...	201	...	...
Total	490,686	65,652	555,771	11.71	546,598	2,152	598,750	3.93
LOWER BARI DOAB CANAL.								
1. Wrong assessment	...	8	...	...	...	...	...	...
2. Escape irrigation
3. Under Tenancy Rules	...	6,079	...	...	...	37,603	...	...
4. Short supply	20	...	...
5. Hail	...	8	...	...	...	2,593	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain	...	41,053	...	...	...	377	...	...
{ (b) from canal	4	...	...
9. Rats	...	130	...	...	...	212	...	...
10. Locusts	...	20	...	...	...	...	...	...
11. Other insects and blight	...	310	...	...	...	107	...	...
12. Bad germination or cultivation	...	2,834	...	...	...	4,052	...	...
13. Bad soil	...	11,444	...	...	...	22,700	...	...
14. High land	...	72	...	...	...	7	...	...
15. Miscellaneous	...	5,102	...	...	...	10,553	...	...
Total	174,227	122,280	295,526	41.21	210,847	78,227	325,074	21.00

(A) Detail of area remitted—

In the four Divisions	...	...	...	...	...	Kharif.	Rabi.
In Patiala State	...	...	...	...	...	25,470	4,954
In Jind State	...	...	...	...	...	8	20
	...	...	...	...	...	60	58
Total	...	...	...	...	...	25,539	5,038

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1917-18—CONTINUED.**

CAUSE OF REMISSION.	KHARIF, 1917.				RABI, 1917-18.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
UPPER CHENAB CANAL.	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
1. Wrong assessment	1	...	...
2. Escape irrigation
3. Under Tenancy Rules	6	...	...
4. Short supply	85	...	...	...	...	...	...
5. Hail	3,057	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain { (b) from canal	...	9,397	...	...	...	101	...	...
9. Rats	40	...	...
10. Locusts	36	...	...	...	...	...	...
11. Other insects and blight	60	...	...	...	131	...	...
12. Bad germination or cultivation	1,939	...	...	...	1,247	...	...
13. Bad soil	17	...	...	...	561	...	...
14. High land
15. Miscellaneous	620	...	...	...	1,212	...	...
16. Perpetual remission
17. Deg Nallah
Total ...	232,956	12154	245,110	4.06	130,539	7,285	137,825	5.29
LOWER CHENAB CANAL.								
1. Wrong assessment	1	...	...
2. Escape irrigation	9	...	...
3. Under Tenancy Rules	705	...	...	...	37	...	...
4. Short supply	2	...	...	...	114	...	...
5. Hail	4,406	...	...
6. Frost	17	...	...	...	9	...	...
7. High wind	213	...	...	...	...	...	...
8. Flooding { (a) by heavy rain { (b) from canal	...	2,092	...	...	...	248	...	...
9. Rats	94	...	...	...	14	...	...
10. Locusts	8	...	...	...	...	...	...
11. Other insects and blight	55	...	...	...	21	...	...
12. Bad germination or cultivation	46	...	...	...	2	...	...
13. Bad soil	279	...	...	...	1,123	...	...
14. High land	160	...	...	...	1,078	...	...
15. Miscellaneous	2	...	...
Total ...	723,325	3,955	727,281	0.54	1,541,859	7,955	1,549,814	0.51
UPPER JHELUM CANAL.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	42	...	...
5. Hail	17	...	...	...	387	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain { (b) from canal	...	767	...	...	...	203	...	...
9. Rats
10. Locusts
11. Other insects and blight	412	...	...	...	76	...	...
12. Bad germination or cultivation	5	...	...	...	403	...	...
13. Bad soil	127	...	...
14. High land
15. Miscellaneous	87	...	...	...	58	...	...
16. Cotton remission	1,271	...	...
Total ...	65,590	1,318	67,208	1.98	107,165	2,638	109,798	2.40
LOWER JHELUM CANAL.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules	1,084	...	...	...	1,492	...	...
4. Short supply	5	...	...	...	90	...	...
5. Hail	26	...	...	...	7,880	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain { (b) from canal	...	61	...	...	...	...	...	...
9. Rats
10. Locusts
11. Other insects and blight	55	...	...	...	...	...	...
12. Bad germination or cultivation	1,470	...	...	...	322	...	...
13. Bad soil	95	...	...	...	115	...	...
14. High land
15. Miscellaneous	356	...	...	...	750	...	...
Total ...	223,719	3,153	231,872	1.35	523,003	10,595	533,598	1.98

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1917-18—CONTINUED.**

CAUSE OF REMISSION.	KHARIP, 1917.				RARI, 1917-18.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
UPPER SUTLEJ INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	...	1,455	...	...	...	...	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal	...	5,364	...	...	...	...	...	...
9. Rats
10. Locusts
11. Other insects and blight	...	10	...	...	...	...	...	...
12. Bad germination and cultivation
13. Bad soil
14. High land
15. Miscellaneous
Total	183,071	6,829	189,900	3.60	247,957	...	247,957	...
SIDHNAI CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	...	577	...	...	...	1,391	...	...
5. Hail	5,721	...	...
6. Frost
7. High wind
8. Flooding { (1) by heavy rain (2) from canal (3) from river	...	15,715 871	...	...	...	...	...	...
9. Rats
10. Locusts
11. Other insects and blight	...	16	...	...	...	101	...	...
12. Bad germination or cultivation
13. Bad soil	...	9,031	...	...	...	8,293	...	...
14. High land	32	...	...
15. Miscellaneous
Total	104,997	26,210	131,207	19.97	171,697	15,533	187,235	8.29
INDUS INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	...	23	...	...	...	...	...	...
5. Hail	221	...	...
6. Frost
7. High wind	...	79	...	...	...	101	...	...
8. Flooding { (1) by rain (2) from canal (3) hill torrent (4) from river	...	7,985 572 32,220 376	...	...	...	8 686 12	...	...
9. Rats
10. Locusts
11. Other insects and blight	141	...	...
12. Bad germination or cultivation	420	...	...
13. Bad soil	...	10,939	...	...	...	7,986	...	...
14. High land
15. Some water	...	620	...	...	...	...	...	...
16. Scarcity of rain
17. Miscellaneous	198	...	...
Total	84,619	53,423	140,042	38.14	54,444	9,727	64,171	15.14

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1917-18—CONTINUED.**

CAUSE OF REMISSION.	KHAIR, 1917.				RABI, 1917-18.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
1	2	3	4	5	6	7	8	9
CHENAB INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	886	...	...	...	481	...	...
5. Hail	1,816	...	...
6. Frost
7. High wind
8. Flooding { (1) by rain	10,163	...	...	...	184	...	...
(2) from canal	535	...	...	...	...	...	...
(3) from river	52	...	...
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil	3,953	...	...	...	7,532	...	...
14. High land	95	...	...
15. Miscellaneous
Total ...	70,413	21,011	97,441	21.59	121,136	10,102	131,593	7.72
LOWER SUTLEJ INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	58	...	...	...	1,504	...	...
5. Hail	02	...	...
6. Frost	432	...	...
7. High wind
8. Flooding { (a) by heavy rain	44,025	...	...	...	40	...	...
(b) from canal
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil	2,125	...	...	...	8,719	...	...
14. High land	6,144	...	...
15. Miscellaneous	246	...	...	...	...	...	...
Total ...	115,367	46,454	161,821	28.7	186,662	16,701	203,363	8.21
MUZAFFARGARH INUNDATION CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	814	...	...	...	216	...	...
5. Hail	2,552	...	...
6. Frost
7. High wind
8. Flooding { (a) by heavy rain	19,701	...	...	...	199	...	...
(b) from canal	9,203	...	...	...	1,021	...	...
9. Rats
10. Locusts
11. Other insects and blight	13	...	...	...	3	...	...
12. Bad germination or cultivation	873	...	...	...	4,028	...	...
13. Bad soil	330	...	...	...	4,523	...	...
14. High land
15. Miscellaneous	1,909	...	...	...	10,889	...	...
Total ...	123,913	31,635	160,548	19.7	201,096	23,431	224,527	10.4

**STATEMENT SHOWING AREAS ON WHICH OCCUPIERS' RATES WERE REMITTED
DURING THE YEAR 1917-18—CONCLUDED.**

Cause of remission.	Kharif, 1917.				Rabi, 1917-18.			
	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.	Area assessed.	Area remitted.	Total area irrigated.	Percentage remitted.
	2	3	4	5	6	7	8	9
1	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
SHAHNUR IMPERIAL CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal	189	...	...	...	...	...	...
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation	2,026	...	...
13. Bad soil
14. High land
15. Miscellaneous
Total	17,459	189	17,648	1.07	22,059	2,026	24,085	11.7
CHAGGAR CANALS.								
1. Wrong assessment	5	...	...
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	27	...	...	...	419	...	...
5. Hail
6. Frost
7. High wind	28	...	...
8. Flooding { (a) by heavy rain (b) from canal	121	...	...	...	876	...	...
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil
14. High land
15. Miscellaneous
Total	11,132	(A) 148	11,280	1.31	17,888	(B) 1,326	19,214	6.9
SHAHNUR PROVINCIAL CANALS.								
1. Wrong assessment
2. Escape irrigation
3. Under Tenancy Rules
4. Short supply	503	...	...	...	413	...	...
5. Hail
6. Frost
7. High wind
8. Flooding { (a) by heavy rain (b) from canal
9. Rats
10. Locusts
11. Other insects and blight
12. Bad germination or cultivation
13. Bad soil	41	...	...	...	493	...	...
14. High land
15. Miscellaneous
Total	14,444	544	14,988	3.63	9,201	893	10,097	8.87
					(A)	(B)		
British	33	451		
Bikaner	115	875		
Total	148	1,326		

II E.

STATEMENT SHOWING INCIDENCE OF WORKING EXPENSES AND ASSESSED WATER REVENUE ON THE CANALS IN THE PUNJAB DURING 1917-18.

NAMES OF CANALS.	WATER RATE ASSESSED IN 1917-18.										WORKING EXPENSES.					OCCUPIERS' RATES.			TOTAL WATER RATE, DIRECT AND INDIRECT.	
	Average discharge of the year at canal head less volume escaped, in cu. ft.	Occupiers.		Owners.		Total direct.		Indirect.	Total direct and indirect.		From all sources.	Working expenses, direct and indirect.	Area assessed during 1917-18.	Per cent. on gross revenue.	Per acre assessed.	Per cu. ft. of discharge.	Per acre assessed.	Per cu. ft. of discharge.		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.									Rs.	Rs.
MAJOR IRRIGATION WORKS.																				
Western Jumna Canal (including Sirsa Branch, British and Patiala).	2,557	29,85,314	...	...	29,85,314	2,30,270	32,16,230	32,72,921	14,73,835	69,749	13.85	2.13	518	4.29	1,046	4.65	1,126	...
Sirhind Canal (British)	2,282	21,67,915	...	...	21,67,915	98,174	22,65,119	25,82,260	12,34,492	511,195	49.15	2.32	549	4.01	960	4.19	993	...
" (Patiala, Nabla and Jind States)	1,967	10,19,099	...	...	10,19,099	...	10,18,639	17,11,611	9,41,260	379,080	55.18	2.49	480	4.27	769	4.27	709	...
Upper Bari Doab Canal	3,168	37,09,303	...	...	37,09,303	7,13,319	44,21,621	47,63,525	13,34,143	1,677,281	27.99	1.21	421	3.44	1,171	4.10	1,440	...
Lower Bari Doab Canal	3,268	17,76,312	...	...	17,76,312	2,82,602	20,59,914	21,01,196	9,13,556	421,074	43.49	2.17	280	4.22	544	4.89	631	...
Upper Chenab Canal	2,185	20,02,689	...	...	20,02,689	5,70,677	25,40,363	25,78,120	10,66,613	363,195	42.15	2.09	497	5.53	920	6.99	110	...
Lower Chenab Canal	7,791	86,15,945	7,219	...	86,15,945	73,34,134	1,61,62,329	1,62,53,735	21,60,511	2,232,215	13.13	1.03	316	3.80	1,106	7.13	2,074	...		
Upper Jhelum Canal	1,064	6,93,421	...	...	6,93,421	1,21,733	11,16,154	11,32,919	8,27,193	761,722	72.10	4.78	778	4.01	651	6.44	1,064	...
Lower Jhelum Canal	2,757	26,02,313	...	...	26,02,313	18,38,632	12,41,103	42,99,321	9,55,665	761,722	21.30	1.21	332	3.46	914	5.61	1,538	...
Upper Satlej Canals	1,515	5,70,159	...	...	5,70,159	2,57,728	8,22,167	8,36,201	3,82,324	131,028	46.73	0.99	552	1.32	377	1.91	543	...
Sidhni Canals	1,415	6,21,116	...	...	6,21,116	1,75,137	7,78,273	7,51,845	1,59,769	276,694	20.30	0.67	112	2.21	438	2.81	550	...
Indus Inundation Canals	3,782	1,41,117	...	...	1,41,117	2,46,810	3,91,257	4,61,753	3,69,182	141,063	99.50	2.82	105	1.02	38	2.77	103	...
MINOR IRRIGATION WORKS.																				
Shahpur (Imperial) Inundation Canals	212	90,109	...	...	90,109	33,297	1,25,505	1,25,505	60,499	39,515	49.48	1.63	285	2.29	456	3.18	593	...
Ghaghara Inundation Canals (British)	514	10,597	...	...	10,597	...	16,397	16,397	34,711	21,359	211.70	1.15	63	0.70	30	0.76	30	...
" (Bikaner)	200	417,467	...	...	417,467	...	17,457	17,457	7,762	7,091	19.13	1.01	29	2.27	60	2.27	60	...
Lower Sutlej Inundation Canals	2,725	3,34,625	...	...	3,34,625	2,96,429	6,30,951	6,30,951	2,62,069	302,029	39.61	0.83	92	1.10	122	2.08	231	...
Chenab Inundation Canals	2,101	2,23,014	...	...	2,23,014	3,01,255	5,37,369	5,37,369	1,19,523	197,819	26.89	0.75	71	1.17	110	2.71	235	...
Muzaffargarh Inundation Canals	5,663	4,03,870	...	...	4,03,870	3,96,916	6,40,780	6,40,780	3,35,249	330,069	47.22	1.01	59	0.89	51	2.09	122	...
Shahpur (Provincial) Inundation Canals	313	34,974	...	...	34,974	11,881	49,855	49,855	47,007	23,615	95.49	2.01	152	1.47	111	2.10	159	...
Ravi Inundation Canals	...	...	...	...	...	1,770	1,770	1,770	1,770	...	105.31	...	...	...	...	...	...	...

* Includes Rs. 46,529 actually spent by the Patiala State.
 † " 3,627 actually spent by the Bikaner State.
 ‡ Figures reported by the Bikaner State.

III E.

**STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED IN THE
PUNJAB DURING THE YEAR 1917-18**

STATEMENT OF QUANTITY AND VALUE OF CROPS

NAME OF CROPS.			WESTERN JYMA CANAL.		SIRHIND CANAL (BRITISH).		SIRHIND CANAL (NATIVE STATES BRANCHES).		UPPER-HARI DOAB CANAL.	
English.	Vernacular.	Scientific.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.
1	2	3	4	5	6	7	8	9	10	11
Cereals—										
Wheat ...	Gehu ...	Triticum sativum ...	172,060	1,10,11,840	107,267	1,09,49,635	117,225	0,41,675	203,410	1,11,57,550
Barley ...	Joe ...	Hordeum vulgare ...	11,781	5,66,553	35,645	13,70,510	20,675	7,81,697	7,181	2,23,702
Rice ...	Jhona ...	Oryza sativa ...	16,814	6,38,032	5	4,578	1,78,604	70,074	70,074	39,03,078
Maze ...	Zakki ...	Zea mays ...	1,633	71,527	30,160	0,33,330	20,311	6,15,531	49,214	0,39,582
Ones ...	Jawi ...	Avena sativa ...	393	16,321	...	...	...	4,012	4,012	1,17,360
Mixed grain ...	Berra ...	...	20,424	1,08,189	...	...	4,491	1,31,150	130,337	49,76,725
Miscellaneous ...	...	...	2,377	62,291	...	...	1,175	25,630	201	6,472
Millet and pulses—										
Great Millet ...	Jawar ...	Sorghum vulgare ...	37,049	2,27,640	2,111	13,668	151	0,06	...	...
Spiked Millet ...	Bayra ...	Panicum spicatum ...	0,112	2,18,688	1,687	0,326	1,010	7,611	1,607	6,428
Italian Millet ...	Kongal ...	Setaria italica ...	18	283	...	...	...	459	320	8,225
...	Mandua ...	Pennisetum coccineum ...	61	1,230	...	...	...	...	...	...
...	Sawauk ...	Panicum frumentaceum ...	...	...	...	...	...	...	...	...
Gram ...	Chana ...	Cicer arietinum ...	24,672	2,16,438	31,805	8,61,165	11,502	3,12,054	90,830	26,35,022
Lentil ...	Masur ...	Ervum lens ...	3,481	61,620	138	4,110	201	6,730	3,607	67,000
...	Rawan ...	...	...	...	...	...	...	...	...	...
Peas ...	Mattar ...	Pisum sativum ...	608	12,060	12	300	12	300	1	20
...	Mooh ...	Phaseolus radiatus ...	6	1,200	12	300	27	810	30	1,170
...	Mung ...	Phaseolus mungo ...	103	2,060	7	140	175	3,500	2,140	53,500
...	Mooh ...	Phaseolus aconitifolia ...	398	8,820	3,670	40,185	126	1,500	10,609	2,61,300
...	Guar ...	Cyamopsis psoraloides ...	8,635	1,30,275	31,208	8,36,210	8,225	90,760	32,720	8,08,600
Mixed Grain ...	Berra ...	...	6,185	2,15,650	...	...	1	20	1,363	30,000
...	Cheena ...	Panicum mitaceum ...	...	...	5	175	13	475	7	25
Miscellaneous ...	Maddal ...	...	10,717	2,60,765	...	...	...	...	12	1,675
Drugs and Spices—										
Tobacco ...	Tamaka ...	Nicotiana glauca ...	632	37,930	45	3,600	51	3,250	869	73,780
Poppy ...	Post ...	Papaver somniferum ...	...	...	...	...	...	...	...	...
Aniseed and Dill ...	Ajwan ...	Ptychotis ajowan ...	11,523	2,05,700	...	...	...	...	...	...
Fennel ...	Jeila ...	Trigonotis foeniculgachum ...	688	16,791	...	1,640	20	800	30	1,140
Coriander ...	Dhania ...	Coriandrum sativum ...	...	...	...	...	...	...	...	...
Cumin ...	Haldi ...	Cuminum officinale ...	...	...	...	...	...	...	...	...
Turneric ...	Saunf ...	Curcuma longa ...	1	40	...	...	...	...	1	70
Aniseed ...	Kasni ...	Pimpinella anisatum ...	...	...	...	...	...	...	...	...
Miscellaneous ...	...	...	26	390	...	...	...	...	3	45
Fibres—										
Cotton ...	Bul ...	Gossypium herbaceum ...	160,371	30,47,100	14,609	2,83,003	13,143	8,10,813	134,180	18,78,640
Rosella Hemp ...	Son ...	Hibiscus cannabinus ...	1,063	20,675	267	8,040	607	18,210	602	18,060
Fales Hemp ...	Samul ...	Crotalaria juncea ...	870	21,180	1,896	50,630	...	...	1,001	58,820
Miscellaneous ...	Manjkana ...	Saccharum munja ...	...	...	...	...	...	...	...	...
Dyes—										
Indigo ...	Nil ...	Indigofera tinctoria ...	3,617	65,425	...	...	710	25,185	13	1,010
Henna ...	Mchadi ...	Lawsomia alba ...	...	...	...	...	...	...	...	...
Safflower ...	Kasumba ...	Carthamus tinctorius ...	1	40	...	...	...	...	...	...
Miscellaneous ...	...	...	...	...	...	...	...	...	...	...
Oil-seeds—										
Gingelly or Sesame ...	Thi ...	Sesamum indicum ...	2,435	51,890	32	118	8	112	692	25,608
Rape ...	Sarson ...	Brassica campestris ...	3,708	81,570	872	12,209	640	8,001	7,200	2,11,410
Do. ...	Toria ...	Do. (Var. toria) ...	7	161	25	770	...	...	4,001	1,14,828
Linseed Flax ...	Taramira ...	Ernea sativa ...	...	...	24	386	60	1,880	180	4,011
Miscellaneous ...	Alsi ...	Linum usitatissimum ...	1	22	2	29	14	106	234	7,380
Fruits and Vegetables—										
Orchards ...	...	...	...	...	...	...	...	...	...	...
Chillies ...	Mirch ...	Capsicum annuum ...	070	78,320	101	10,100	182	18,200	1,068	70,500
Melons ...	Kharbuza ...	Cucumis melo ...	1,391	61,050	3,630	1,01,050	1,315	67,750	10,631	4,21,360
Carrots ...	Gajar ...	Daucus carota ...	210	8,640	...	...	101	5,095	...	...
Cress ...	Halum ...	Lepidium sativum ...	137	5,400	90	1,800	85	1,700	...	...
Onions ...	Plaz ...	Allium cepa ...	64	3,200	...	...	3	160	24	1,320
Turnips ...	Salgan ...	Brassica rapa ...	...	...	603	31,050	...	...	0,921	3,02,840
Water-nuts ...	Singhura ...	Trapa bicornis ...	103	7,680	...	71,200	...	...	14	840
Garden's ...	...	...	9,668	9,66,800	712	71,200	2,000	2,60,000	0,064	9,06,400
Polatoes ...	Alu ...	Solanum tuberosum ...	30	4,680	...	...	...	...	816	81,600
Vegetables ...	Tarkari ...	...	2,150	1,67,600	1,820	1,32,030	293	2,7,510	2,065	2,06,300
Miscellaneous ...	Lehsan ...	...	309	7,060	...	...	016	18,540	13	300
Fodder—										
Lucerne Grass ...	Lusan Ghas ...	Medicago sativa ...	250	14,000	20	600	5	125	603	36,180
Grass ...	Senji ...	Do. Var. ...	463	9,045	10,017	3,32,810	10,553	3,31,060	102,835	30,83,710
Millets, etc. ...	Ghas ...	...	137	2,085	141	4,230	230	7,170	1,213	18,405
Sugarcane ...	Charhi ...	...	2,720	55,050	100,672	31,07,160	71,127	21,12,510	102,078	30,60,340
...	Ganna ...	Saccharum officinarum ...	67,313	1,14,36,230	3,516	1,04,112	0,700	8,85,569	49,151	69,86,022
...	Shafal ...	...	1	15	...	...	1,205	25,040	...	...
Miscellaneous ...	Metira ...	...	808	12,120	245	4,000	...	...	2,749	64,060
Total										
Fallow ...	...	...	31,049	...	55,401	...	37,417	...	112	...
Single watering ...	...	...	7,740	...	...	...	...	...	928	...
Plantations ...	...	...	38	...	...	...	...	...	12,372	...
Miscellaneous ...	...	...	28,813	...	...	...	...	...	1,358	...
Waste of water ...	...	...	688	...	45	...	...	...	...	...
Palsver ...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL										
			601,749	8,10,01,712	511,103	1,05,10,665	370,080	74,23,009	1,077,284	1,20,71,823

E.

IRRIGATED IN THE FUNJAB DURING THE YEAR 1917-18.

LOWER BARI DOAB CANAL.		UPPER CHENAB CANAL.		LOWER CHENAB CANAL.		UPPER JHEUM CANAL.		LOWER JHEUM CANAL.		UPPER SUTLEY INUNDATION CANAL (INCLUDING LOWER SONAH AND PARA CANAL).	
Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.	Area assessed to water-rates.	Estimated value.
12	13	14	15	16	17	18	19	20	21	22	23
Acre.	Rs.	Acre.	Rs.	Acre.	Rs.	Acre.	Rs.	Acre.	Rs.	Acre.	Rs.
181,073	1,11,56,380	60,322	40,00,800	60,116	6,14,56,289	81,621	20,33,100	331,321	1,35,61,671	60,807	60,58,099
5,105	1,60,115	3,001	1,14,111	19,077	8,71,710	2,835	61,030	8,672	2,67,103	4,851	1,45,045
0,653	4,78,160	66,220	61,10,800	78,311	13,70,100	8,706	3,10,653	4,203	1,53,493	30,003	15,45,180
17,103	2,60,515	1,002	1,86,516	60,390	21,61,070	3,610	4,9,268	21,445	4,09,031	6,028	76,300
218	9,810	..	..	1,074	41,379	657	32,200	1,411	1,77,610	1,060	31,600
121	2,460	..	..	7,782	2,33,460	..	..	..	..	60,335	19,00,030
12,010	36,057	10,082	1,53,454	10,601	2,73,011	5,650	25,030	48,110	2,42,050	..	..
3,101	95,730	130	1,170	17,250	1,10,751	6,231	62,608	21,287	7,31,010	8,638	2,10,090
185	4,375	..	..	71	1,639	..	..	33	625	1,780	41,600
2	60	..	..	1	15	..	..	754	11,310	..	..
41	850	110	2,020	221	1,420	12	210	2,197	47,740	160	3,200
0,632	1,85,001	7,700	1,81,160	60,180	11,63,261	987	14,632	12,440	3,56,010	64,872	11,61,511
239	7,170	250	7,600	3,225	80,730	222	6,660	7,119	1,11,800	181	8,600
2,021	65,030	..	..	2,044	53,600	8	120	240	14,020	4	60
161	4,650	114	4,440	799	23,900	..	..	182	4,460	..	..
1	20	5	100	60	800	10	350	65	1,650	601	17,730
1,700	1,20,000	114	2,570	6,008	1,05,200	40	1,100	10	200	43	1,230
1,152	29,650	7	135	4,661	1,21,600	11	110	1,007	2,175	325	8,125
143	3,575	27	676	737	18,175	67	2,175	6,814	1,30,870	0,375	1,31,600
..	..	23	110	141	2,850	..	..	5	100	..	..
..	..	..	..	11,477	2,10,655	..	..	2,474	61,860	23	676
..
270	16,000	60	8,620	1,060	1,33,630	398	27,010	600	61,000	43	2,680
..
203	8,130	27	675	731	29,210	10	010	62	2,050	11	230
..	..	..	..	..	..	..	..	320	15,010	511	20,600
..	..	..	..	12	400	..	..	..	..	301	11,140
..	..	..	..	4	60	..	..	2	60	..	..
..
60,350	40,22,092	20,020	0,10,120	21,454	1,60,01,000	20,206	4,25,634	76,201	66,00,073	42,409	14,41,009
1	30	..	..	1,652	40,860	10	490	701	21,030	182	3,010
607	15,210	361	10,021	5,616	75,159	45	1,360	21	630	620	16,600
..	..	..	..	..	..	..	..	25	750	8	120
..
429	16,600	..	..	298	0,520	3	120	4	100	..	..
1	60	..	..	10	670	..	..	187	4,170	32	800
..	..	..	..	71	2,130	11	330	123	3,690	..	..
..
3,010	1,01,000	251	2,731	3,211	61,038	400	10,600	662	10,678	1,000	1,10,618
3,514	01,360	2,773	2,21,079	63,300	25,10,100	210	5,070	5,361	1,60,010	67	1,368
18,529	4,70,700	8,633	2,30,178	160,118	12,00,160	12,016	3,40,506	81,601	21,61,420	471	9,824
3,377	81,125	760	10,600	4,60	1,15,820	130	3,610	6,066	1,17,101	1,031	25,200
100	2,600	74	1,021	1,230	63,180	14	361	401	11,020	..	..
..	..	4	101	17	450	400	10,801	..	..	..	..
..
2	160	..	..	331	20,720	4	120	18	1,110	124	0,300
0,219	4,60,000	3,137	1,10,670	32,211	16,10,650	8,055	4,02,555	16,331	7,06,670	30	1,170
..	..	..	..	299	33,120	10	400	213	8,620	56	1,060
117	6,850	..	..	10	670	37	1,110	3	767	..	..
12,329	4,05,440	1,270	50,120	66	3,300	..	..	25	160	..	..
3,670	1,01,500	..	..	60,001	21,34,119	6,809	2,32,320	43,069	17,22,700	15,673	0,91,020
27	2,700	189	18,670	3,734	3,74,000	11	1,100	1,627	1,02,700	263	25,800
1,121	76,470	338	27,600	67	6,700	128	5,820	..	..	4	400
..	..	..	..	0,783	4,60,600	..	..	1,360	81,020	153	7,680
..
..	..	11	430	465	13,030	..	..	10	670	..	..
007	42,600	110	5,600	52,180	11,02,600	..	300	2,108	1,00,000	..	..
2,004	87,150	5,600	1,70,070	61,180	27,13,000	719	22,290	9,675	2,06,220	80	20,370
1,402	55,880	1,134	31,090	5,383	1,61,400	8,121	2,44,720	4,000	1,47,000	20,089	2,00,000
12,330	3,67,500	6,131	1,85,430	162,202	4,07,800	..	..	6,010	1,78,200	67,621	17,91,720
6,703	5,80,910	1,864	40,000	9,147	2,28,625	178	4,450	1,500	20,150	..	..
..	..	7,280	0,31,773	71,130	60,00,000	2,817	2,27,700	10,743	8,60,110	2,620	3,32,610
..	..	..	..	451	22,650	203	10,160	1,131	2,07,060	..	..
..	11,025	60	2,160	3,355	53,876	8	200	167	4,176	406	10,160
..	..	..	..	241	5,650	..	..	1	20	650	17,150
418,295	2,07,00,000	317,551	1,31,41,510	2,258,333	10,64,91,814	170,301	46,60,214	717,746	2,04,43,614	130,925	1,00,80,785
610	..	706	..	2,636	..	..	..	065	..	..	..
2,204	..	12,038	..	3,623	..	2,078	..	3,078	..	..	..
60	..	6	..	01	..	10	..	201	..	103	..
..	..	..	..	30	..	..	..	..	..	..	..
..
..
421,070	2,07,00,023	303,495	1,31,41,510	2,267,216	10,61,61,911	1,73,655	46,60,214	751,722	2,04,43,614	431,026	1,00,80,885

STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED

NAME OF CROPS.			SIDHAI CANAL.		INDUS IRRIGATION CANAL.		SHARPER (IMPERIAL) IRRIGATION CANAL.		GHAGGAR CANAL (BRITISH).	
English.	Vernacular.	Scientific.	Area assessed to water-works.	Estimated value.	Area assessed to water-works.	Estimated value.	Area assessed to water-works.	Estimated value.	Area assessed to water-works.	Estimated value.
1	2	3	24	25	26	27	28	29	30	31
Cereals—			Acrea.	Rs.	Acrea.	Rs.	Acrea.	Rs.	Acrea.	Rs.
Wheat	Golun	Triticum sativum	110,222	77,23,512	23,002	13,56,080	10,037	4,40,647	3,194	1,09,936
Barley	Joe	Hordeum vulgare	3,860	1,10,000	1,130	35,216	226	6,780	157	6,781
Rice	Jhona	Oryza sativa	18,814	4,69,011	36,216	9,41,016	135	18,180	8,167	3,47,989
Maire	Mukhl	Zea mays	1,608	22,680	10	240	139	3,187	...	...
Oats	Jwari	Avena sativa	655	27,490	...	...	270	10,800	...	...
Mixed grain	Berra	...	...	...	...	...	...	...	...	...
Miscellaneous	...	...	6	120	...	...	...	...	...	...
Millets and Pulses—			...	...	...	...	...	...	...	...
Grass Millet	Jawar	Sorghum vulgare	10,523	32,400	11,149	1,00,072	...	25	150	...
Spiked Millet	Rajra	Panicum spicatum	1,578	50,180	4,477	1,01,310	868	25,710	...	...
Italian Millet	Kangul	Setaria italica	88	1,780	49	1,470	1	23	...	...
...	Mandva	Eleusine coracana	1,181	23,620	24	600	...	...	...	...
...	bayank	Panicum frumentaceum	1,107	23,210	144	18,580	60	1,160	...	...
Gram	Chana	Cicer arietinum	10,215	6,10,015	9,735	2,04,222	7,104	2,14,751	2,750	80,011
Lenfil	Nasur	Astragalus lentiginos	452	6,040	268	7,710	828	8,730	...	...
...	Rawan	...	2,830	82,160	...	...	...	...	...	...
Peas	Mattar	Pisum sativum	1,082	21,040	5,788	1,49,950	325	4,575	...	...
...	Mash	Phaseolus radiatus	6,650	2,70,250	...	...	...	...	...	...
...	Mung	Phaseolus mungo	169	2,356	50	2,000	...	175	...	...
...	Moth	Phaseolus aconitifolia	260	3,610	1,221	30,625	7	626	35	631
Mixed grain	Guar	Cyamopsis psoraleoides	...	...	...	...	21	...	3,463	60,575
...	Berra	...	690	10,350	0	90	61	915	...	...
Miscellaneous	Cheena	Panicum mitchellianum	...	...	...	...	...	...	...	...
...	Maddal	...	741	11,180	8	120	...	...	336	5,063
Drugs and Spices—			...	...	...	...	...	...	...	...
Tobacco	Tumaku	Nicotiana glauca	637	31,650	1,443	1,16,440	21	1,200	...	...
Poppy	East	Papaver somniferum	...	...	...	...	...	...	...	...
Aniseed and DH	Ajwain	Psychotria ajwain	...	...	...	...	...	...	...	...
Cardamom	Methi	Trigonotis foenulgicum	159	0,360	6	240	...	...	...	...
Cumin	Dhani	Coriandrum sativum	...	...	2	80	...	...	...	...
Turnerle	Zira	Cominum officinale	...	...	...	...	...	...	...	...
Aniseed	Haldi	Curcuma longa	...	...	...	...	...	...	...	...
Miscellaneous	Saunf	Pimpinella anisum	...	...	4	200	...	...	...	...
...	Kandi	...	50	885	8	120	...	...	...	...
Fibres—			...	...	...	...	...	...	...	...
Cotton	Rai	Gossypium herbaceum	38,797	16,74,260	15,207	3,49,761	6,706	4,00,109	...	...
Rosella Hemp	San	Hibiscus esculentus	168	3,180	...	...	12	150	...	...
Furze Hemp	Fanni	Crotalaria juncea	...	...	...	...	...	...	1	30
Miscellaneous	Munjkana	Saccharum munja	...	...	...	...	...	...	...	...
Dyes—			...	...	...	...	...	...	...	...
Indigo	NH	Indigofera tinctoria	1,183	35,400	0,015	3,70,000	...	...	...	...
Henna	Mehndi	Lawsenia alba	...	...	22	850	...	...	...	...
Eallawer	Kusumba	Carthamus tinctorius	...	...	...	...	...	...	...	...
Miscellaneous	...	...	...	...	...	...	...	...	...	...
Oil-seeds—			...	...	...	...	...	...	...	...
Gingelly or Sesame	Til	Sesamum indicum	6,130	1,47,120	117	2,609	38	1,102	12	264
Rape	Sarson	Brassica campestris	441	10,681	162	3,048	...	...	801	20,142
Do.	Toria	Do. (Var. toria)	8,846	1,40,304	...	...	71	2,080	...	...
Linseed Flax	Taramira	Erucica sativa	3,218	77,062	1,400	36,736	66	1,603	237	6,214
Miscellaneous	Alsi	Linum usitatissimum	382	9,108	142	3,408	...	...	...	...
Fruits and Vegetables—			...	...	...	...	...	...	...	...
Orchards	Mirch	Capellum anatum	54	3,780	54	3,780	...	...	...	...
Chillies	Kharbuza	Cucumis melo	8	226	6	360	2,458	73,740	14	700
Melons	Gajar	Daucus carota	...	...	4	140	...	...	...	35
Carrots	Halum	Lepidium sativum	...	...	20	300	...	...	071	21,276
Cress	Piaz	Allium cepa	...	...	...	...	...	...	...	...
Onions	Falgam	Brassica rapa	17,807	3,47,910	1,260	60,760	1,800	64,160	...	...
Turnips	Singhara	Trapa bicornis	123	13,200	918	21,800	...	8,000	10	1,000
Water-nuts	...	...	...	...	...	...	...	...	...	...
Gardens	...	...	...	...	...	...	...	...	...	...
Palataca	Alu	Salanum tuberosum	627	88,220	209	20,720	32	2,240	...	...
Vegetables	Tarkari	...	...	...	...	...	...	...	...	...
Miscellaneous	Lehsan	...	30	780	6	120	...	...	...	...
Fodder—			...	...	...	...	...	...	...	...
Lucerne Grass	Lusan Ghas	Medicago sativa	1,531	30,620	3	105	1	35	...	...
Grass	Senj	Do. Var.	41	410	907	18,140	2,846	58,620	...	...
MHete, etc.	Ghas	...	15,351	8,07,070	5,457	2,18,290	4,621	60,316	...	...
Sugarcane	Charbi	...	...	...	...	...	...	...	...	...
...	Alamu	Saccharum officinarum	203	38,544	65	1,260	53	4,240	...	...
...	Gannu	...	...	...	...	...	...	...	...	...
...	Shafal	...	4,015	80,910	283	5,340	...	...	...	...
Miscellaneous	Methra	...	3,872	69,490	...	...	...	...	...	...
Fallows			...	...	...	...	...	...	...	...
Single watering	...	...	...	...	...	...	...	...	...	...
Plantations	...	...	...	...	...	...	...	...	...	...
Miscellaneous	...	...	...	...	...	...	...	...	73	...
Waste and water	...	...	...	...	...	...	...	...	...	...
Palaver	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL			276,694	1,18,25,803	141,063	42,88,087	39,516	15,09,387	21,339	7,78,600

CONCLUDED.

IN THE PUNJAB DURING THE YEAR 1917-18—CONCLUDED.

[illegible]

IV E.

COMPARATIVE STATEMENT OF IRRIGATION AND RAINFALL FOR THE YEARS 1917-18 AND 1918-17 IN THE PUNJAB.

CIVIL DISTRICT.	OF THE CIVIL DISTRICTS.				Name.	Culturable area, in acres.	Cultivated area, in acres.	Area at present proposed to be annually irrigated by works specified in column 6.	AREA IRRIGATED, IN ACRES.				RAINFALL, INCHES.	
	Total area, in acres.	Culturable area, in acres.	1917-18.	1916-17.					1917-18.	1916-17.				
				Kharif.							Rabi.	Total.		
1	2	3	4	5	(a) 6	(a) 7	8	9	10	11	12	13	14	15
Delhi	370,565	202,350	229,787	{ Western Jumna Canal Sirhind Canal Ghazipur Canals Total	69,505	37,316	13,104	9,059	22,852	10,566	12,437	23,013	2735	2830
Rohtak	1,339,530	1,077,619	1,151,715		672,473	200,841	29,018	19,323	193,412	85,767	119,981	205,728	3009	1931
Karnal	1,694,113	1,719,113	1,712,045		61,813	215,387	29,000	103,091	197,700	81,371	118,101	203,372	2835	2469
Ambala	1,197,213	753,917	756,131	{	34,500	4,493	1,325	1,015	2,340	1,519	1,233	2,752	6590	5223
Hissar	3,318,813	3,163,250	2,753,629	{ Western Jumna Canal Sirhind Canal Ghazipur Canals Total	617,113	228,537	91,238	80,909	175,316	102,703	145,239	217,662	3202	1778
				{	11,800	9,735	607	313	1,210	2,775	2,902	5,683	...	...
				{	72,978	39,531	9,500	12,220	21,823	10,237	19,090	28,327	3930	1770
Jind State	552,013	503,258	719,000	{ Western Jumna Canal Sirhind Canal Total	219,262	60,000	33,131	27,295	129,606	29,062	35,231	64,253	3005	2193
				{	7,200	3,371	13,693	10,851	(a) 20,174	10,110	21,072	(a) 40,182	...	...
				{	227,432	63,371	46,824	38,146	89,870	43,112	59,303	104,435	...	...
Bikaner State	6,123,403	4,036,927	0-2-2-2	{ Western Jumna Canal Ghazipur Canals Total	1,702	17,709	291	192	453	371	637	901	3860	1765
				{	31,918	17,709	1,577	6,591	8,671	2,251	8,780	12,010	2890	1391
				{	4,320	17,709	1,868	7,186	9,124	2,578	9,424	13,001	...	...
Patiala State	3,794,770	3,426,619	2,926,267	{ Western Jumna Canal Sirhind Canal Total	170,461	52,001	10,701	31,264	71,912	32,919	46,715	79,091	2825	1849
				{	313,422	108,614	151,218	26,298	357,490	210,701	323,213	503,967	...	...
				{	483,883	160,615	161,922	21,176	(d) 52,398	213,633	370,008	(e) 613,061	...	...
Kalsha State	121,753	77,302	79,207	{ Western Jumna Canal Sirhind Canal Total	2,171	1,352	843	761	1,204	812	910	1,222	...	...
				{	12,569	3,251	905	1,527	2,492	1,631	3,368	4,997	...	...
				{	14,740	4,603	1,748	2,288	3,696	2,443	4,276	6,219	...	...
Ludhiana	892,632	816,790	751,710	{ Western Jumna Canal Sirhind Canal Total	269,172	70,207	9,174	18,704	27,853	23,559	32,857	53,413	1726	1732
Ferozepore	2,595,369	2,141,126	2,274,090	{	1,258,231	431,067	138,222	231,057	200,359	204,619	307,160	570,808	3331	1610
Nabha State	840,459	628,311	568,702	{	115,273	39,817	30,206	39,227	(f) 74,063	34,177	54,176	(g) 92,968	...	...
Ferozepore State	405,249	360,163	371,055	{	231,137	70,719	31,398	12,070	74,063	13,673	72,804	118,737	...	...
Ambala	998,537	866,070	760,122	{ Upper Bari Doab Canal	650,402	281,655	179,590	170,767	320,327	186,657	240,912	306,629	3901	2795
Amritsar	1,160,369	944,471	930,207	{	127,438	32,470	41,522	22,107	63,059	51,779	33,792	55,570	3913	2478

Lahore	1,750,884	1,514,247	1,230,106	Upper Bari Doab Canal Upper Sutlej Inundation Canals Upper Chenab Canal Lower Bari Doab Canal Total	865,216 281,895 17,382 7,826 1,173,319	487,580 93,916 3,625 4,123 559,533	334,639 31,199 2,045 2,426 370,299	394,043 48,710 719 1,440 439,619	799,272 73,915 2,761 3,886 809,917	390,541 26,232 1,873 2,311 801,157	384,237 32,271 3,772 4,154 423,368	719,098 58,503 3,772 4,154 784,626	33-35 30-01 38-86	22-02 28-53 18-42
Montgomery	2,809,042	2,551,699	947,903	Upper Sutlej Inundation Canals Hajiwah Canal Lower Bari Doab Canal Upper Bari Doab Canal Total	617,041 857,663 ... 1,474,606 344,159	233,228 541,607 ... 776,895 130,000	159,701 217,668 ... 370,299 97,444	205,241 238,388 1,332 439,619 187,335	303,042 436,058 1,233 809,917 318,442	136,328 184,046 ... 301,157 113,933	129,320 196,911 ... 423,368 189,639	254,048 380,957 ... 784,626 208,558	23-07 30-06 17-61	12-54 13-90 18-33
Multan	3,703,983	3,271,851	1,228,066	Sitthal Canal Chenab Inundation Canals Lower Sutlej Inundation Canals Hajiwah Canal Lower Bari Doab Canal Total	360,313 903, - 2 444,079 2,033,703 674,932	200,000 250,000 ... 347,368 350,000	97,444 144,483 17,118 406,754 160,528	131,388 174,735 21,163 279,041 204,513	229,042 319,218 41,593 719,007 384,907	93,567 135,001 13,090 279,041 169,673	208,558 184,777 29,687 577,266 228,691	208,558 319,778 43,877 900,913 309,334	17-61 18-33 19-35 ... 19-54	0-96 0-83 0-15 ... 0-00
Muzaffargarh	3,567,309	3,090,371	741,914	Muzaffargarh Inundation Canals	...	...	...	...	...	...	...	...	...	...
Dera Ghazi Khan	3,475,050	2,511,895	1,145,891	Indus Inundation Canals	...	...	...	...	...	...	...	...	...	...
Gujranwala	2,492,346	2,227,450	1,407,783	Lower Chenab Canal Upper Chenab Canal Total	713,789 1,228,161 1,941,950	463,740 476,922 930,662	160,403 176,700 337,103	288,469 118,013 406,482	434,862 294,715 719,007	163,603 313,502 381,953	317,535 123,327 440,862	493,598 337,219 822,817	32-09 36-16 ...	21-61 23-30 ...
Iyallpur	2,113,740	1,913,913	1,470,817	Lower Chenab Canal Upper Chenab Canal Total	1,498,286 55,293 1,553,579	1,039,468 61,441 1,100,909	401,236 21,732 422,968	1,031,158 14,938 1,046,096	1,313,394 86,180 1,400,574	44,557 20,241 465,815	1,054,450 10,196 1,064,646	1,503,307 40,037 1,543,344	25-08 33-02 ...	12-14 15-53 ...
Jhang	2,171,716	1,961,736	833,037	Lower Chenab Canal Muzaffargarh Inundation Canals Lower Jhelum Canal Total	398,890 323,638 722,528	233,163 1,487,0 858,039	99,642 38,062 137,704	206,227 83,887 289,062	305,469 131,649 437,086	98,350 41,367 139,713	199,474 87,110 286,582	297,824 121,477 419,301	25-41 19-09 ...	9-62 10-44 ...
Shahpur	3,072,533	2,318,175	1,297,183	Lower Jhelum Canal Shahpur (Imperial) Canals Shahpur (Provincial) Canals Upper Jhelum Canal Total	820,180 62,954 53,255 1,350 938,389	501,543 42,000 24,170 833 568,550	169,829 17,648 14,988 139 222,603	449,007 21,985 10,097 778 478,867	632,835 42,683 25,085 917 701,470	191,563 19,683 6,855 ... 221,101	469,871 27,086 21,519 72 531,578	664,434 40,769 31,404 72 742,670	25-58 20-48 28-48	15-50 20-48 20-08
Gujrat	1,457,212	1,170,034	881,588	Lower Jhelum Canal Upper Jhelum Canal Total	18,647 590,363 609,010	12,503 321,202 333,705	3,983 67,069 71,051	7,604 109,020 118,024	10,986 1,6,089 1,57,075	4,087 42,413 40,480	7,783 75,120 82,903	11,850 117,533 129,383	37-86	32-64
Sialkot	1,261,470	1,135,794	927,572	Upper Chenab Canal Grand Total	191,270 17,181,326	55,008 8,238,921	44,593 3,797,551	4,663 5,200,350	49,246 9,053,901	49,311 3,803,815	8,138 5,880,109	57,449 9,670,824	50-34 ...	30-18 ...

(a) Columns 6 and 7 exclude the "culturable area commanded" and "area of present proposed to be annually irrigated" by the Native States Branches of the Sirhind Canal.

(b) Includes 27,921 acres irrigated on the Native States Branches of the Sirhind Canal.

(c) Ditto 37,723 acres irrigated on the Native States Branches of the Sirhind Canal.

(d) Ditto 398,467 acres irrigated on the Native States Branches of the Sirhind Canal.

(e) Ditto 413,270 acres irrigated on the Native States Branches of the Sirhind Canal.

(f) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(g) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(h) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(i) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(j) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(k) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(l) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(m) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(n) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(o) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(p) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

(q) Ditto 59,665 acres irrigated on the Native States Branches of the Sirhind Canal.

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		For.
			Flow.	Lift.	
Irrigation Branch Notification No. 097 R. I., dated 30th June 1916.		WESTERN JUMNA CANAL INCLUDING SIRSA BRANCH.	Rs. A. P.	Rs. A. P.	
		OCCUPIER'S RATE.			
	I	Sugarcane	10 0 0	6 0 0	Crop.
	II	Rice and water units	6 8 0	4 0 0	Do.
	III	Orchards, gardens, tobacco, poppy, drugs, vegetables, spices, melons.	5 8 0	3 8 0	Gardens and orchards per half-year; the rest per crop.
	III-A	Wheat	5 0 0	3 4 0	Crop.
	IV	Cotton, fibres, dyes, oil-seeds and all rabi crops except wheat, gram, masur, senji, malna and turpips.	4 0 0	2 8 0	Do.
	V	All kharif crops not otherwise specified ...	3 0 0	1 12 0	Do.
	VI	Gram, masur, senji, turnips, carrots and malna .	2 8 0	1 8 0	Do.
	VII	Crops grown on the "wadā" of a previous crop Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 4 0	0 12 0	Crop. Watering.
	VIII	Grass, village and District Board plantations—			
		For any number of waterings in kharif season	1 4 0	0 12 0	Half-year.
		For one watering in rabi season	1 4 0	0 12 0	Do.
		For two or more waterings in rabi season ...	2 8 0	1 8 0	Do.
Irrigation Branch Notification No. 1631 I., dated 27th April 1900.		LOWER CHAUTANG NALA CANAL.			
		OCCUPIER'S RATE.			
	I	Sugarcane, rice, water-nuts	4 2 0	2 12 0	Crop.
	IV	Cotton, indigo, maize	2 8 0	1 10 8	Do.
	V	Other kharif crops	1 12 0	1 2 8	Do.
Irrigation Branch Notification No. 624 R. I., dated 12th May 1913.	VII	Special rate.—Single watering before ploughing for rabi followed by a crop.	1 2 0	0 12 0	Do.
		SIRHIND CANAL.			
		Zone I.			
		<i>All lands irrigated by the British Branches of the Sirhind Canal with the exception of those situated in the Fazilka Tahsil of the Ferozepore District.</i>			
	I	Sugarcane	12 0 0	6 0 0	Crop.
	II	Rice, orchards, gardens, poppy, indigo, dyes, drugs and spices, water-nuts, maize, wheat, vegetables, except turpips.	5 4 0	2 10 0	Orchards and gardens per half-year; the rest per crop.
	III	Cotton, chillies, melons, tobacco, fibres, barley, oil-seeds, berseem, rajli, all non-fodder crops in kharif and rabi not specified.	4 0 0	2 0 0	Crop.
	IV	Bajra, jowar, chhari, moth, mung, маш, guar, china, masur, gram, turnips, peas, and all kharif and rabi fodder crops not specified.	3 4 0	1 10 0	Do.
	V	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest. Also crops grown on the "wadā" of a previous crop.	1 8 0	0 12 0	Each watering. Crop.
	VI	Special rates which may be made applicable to channels selected by the Local Government— A single watering before ploughing followed by a rabi crop.	2 4 0	1 2 0	

**STATEMENT SHOWING OCCUPIER'S RATE-IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per.
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		SIRHIND CANAL—CONCLUDED.			
		Zone II.			
		<i>All lands irrigated by the British Branches of the Sirhind Canal in the Fazilka Tahsil of the Ferozepore District.</i>			
Irrigation Branch Notification No. 273-R. I., dated 21st December 1901.	I	Sugarcane	10 0 0	5 0 0	Crop.
	II	Rice, orchards, garloos, poppy, indigo, dyes, drugs and spices, water-nuts, maize, wheat, vegetables (except turnips)	5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.
	III	Cotton, chillies, melons, tobacco, fibres, barley, oil-seeds, berza, renji, all non-fodder crops in kharif and rabi not specified.	3 12 0	1 14 0	Crop.
	IV	Bajra, jowar, chani, moli, nung, mash, guar, china, masur, gram, turnips, peas and all kharif and rabi fodder crops not specified.	3 0 0	1 8 0	Do.
Irrigation Branch Notification No. 624-R. I., dated 12th May 1913.	V	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 8 0	0 12 0	(Each watering.
		Also crops grown on the "wazh" of a previous crop.			Crop.
		<i>All lands irrigated by other than the British Branches of the Sirhind Canal.</i>			
Irrigation Branch Notification No. 6616-I, dated 27th November 1888.	I	Sugarcane, rice, water-nuts ...	7 8 0	5 0 0	Crop.
	II	Gardens, orchards, tobacco, poppy, vegetables, indigo, maize.	4 8 0	3 0 0	Do.
	III	Cotton, fibres, all dyes (except indigo), all rabi crops (except gram and masur).	3 12 0	2 8 0	Do.
	IV	All kharif crops not specified above and rabi crops of gram and masur.	2 10 0	1 12 0	Do.
Irrigation Branch Notification No. 624 R. I., dated 12th May 1913.	V	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	0 12 0	0 8 0	Each watering.
	VI	Special rate which may be made applicable to channels selected by the Local Government— A single watering before ploughing for rabi followed by a rabi crop.	1 8 0	1 0 0	Crop.

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per.
			Flow.	Lift.	
		UPPER BARI DOAB CANAL.	Rs. A. P.	Rs. A. P.	
		OCCUPIER'S RATE.			
Irrigation Branch Notification No. 2821-L., dated 10th June 1891.	I	Sugarcane and water-nuts	7 1 0	3 8 6	Crop.
	II	Rice	6 0 10	3 0 5	Do.
	III	Orchards and gardens, tobacco, poppy and other drugs, vegetables, melons.	4 8 8	2 4 4	Orchards and gardens per half-year; the rest per crop.
	IV	All dyes, fibres and oilseeds, oil rabi crops except gram and masur.	3 12 6	1 14 3	Crop.
	V	All kharif crops not specified above, rabi crops of gram and masur. All fodder crops.	2 12 5	1 6 2½	Do.
	VI	Special rates which may be made applicable to channels selected by the Local Government—	2 0 4	1 0 2	Do.
Irrigation Branch Notification No. 829-R. I., dated 12th May 1913.		A single watering before ploughing for rabi followed by a crop.			
	VII	A single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 0 2	0 8 1	Each watering.
		Crops grown on the "wadā" of a previous crop...			Crop.
Irrigation Branch Notifications No. 349-R. I., dated 26th March 1907, No. 698-R. I., dated 11th December 1907, No. 930-R. I., dated 2nd July 1908.	VIII	Village plantations and areas to which the provisions of Act III of 1893 have been extended and District Board plantations within the Chutian Colony—			
		For any number of waterings in the kharif season.	1 3 4	0 9 8	Half-year.
		For one watering in rabi season	1 3 4	0 9 8	Do.
		For two or more waterings in rabi season	2 11 7	1 6 0	Do.
		LOWER BARI DOAB CANAL			
		OCCUPIER'S RATE.			
Irrigation Branch Notification No. 547-R. I., dated 23rd April 1913.	I	Cane and water-nuts	9 0 0	4 8 0	Crop.
	II	Rice	7 8 0	3 12 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat.	5 0 0	2 8 0	Orchards and gardens per half-year; rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oilseeds and all rabi crops, except wheat, gram, masur, senji, maize and turnips	4 0 0	2 0 0	Crop.
	V	All kharif crops not otherwise specified	3 0 0	1 8 0	Do.
	VI	(a) Gram, masur, senji, turnips and maize			
		(b) Crops grown on the "wadā" of a previous crop.			
		(c) Single watering before ploughing for rabi followed by a rabi crop to be applicable only to channels selected by the Local Government.	2 4 0	1 2 0	(a) Crop, (b) and (c) acre.
	VII	Grass, village and District Board plantations—			
		For any number of waterings in kharif season.	1 4 0	0 10 0	Half-year.
		For one watering in rabi season	1 4 0	0 10 0	Do.
		For two or more waterings in rabi season	2 8 0	1 4 0	Do.
	VIII	(a) Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	0 8 0	0 4 0	Acre.
		(b) Hemp (sua) and indigo which has been ploughed in as green manure before the 15th September.			
Irrigation Branch Notification No. 6157-R. I., dated 31st August 1917.	Special	Toria and gram sown together in the same field..	5 0 0	2 8 0	Crop.

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Case.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
UPPER CHENAB CANAL.					
OCCUPIER'S RATE.					
Irrigation Branch Notification No. 0223 R. I., dated 8th August 1912.	I	Cane and water-units ...	9 0 0	4 8 0	Crop.
	II	Rice	7 8 0	3 12 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat	5 0 0	2 8 0	Orchards and gardens per half-year; rest per crop.
	IV	Cotton, fibres, dyers (other than indigo) of seeds and all rabi crops, except wheat, gram, masur, renji, masha and turnips.	1 0 0	2 0 0	Crop.
	V	All kharif crops not otherwise specified ...	3 0 0	1 8 0	Do.
	VI	(a) Gram, masur, renji, turnips and masha ...	2 4 0	1 2 0	(a) Crop, (b) and (c) acre.
		(b) Crops grown on the "wadhi" of a previous crop.			
	(c) Single watering before ploughing for rabi followed by a rabi crop to be applicable only to channels selected by the Local Government.				
Irrigation Branch Notification No. 65 R. I., dated 13th January 1913.	VII	Grass, village and District Board plantations—			
		For any number of waterings in the kharif season.	1 4 0	0 10 0	Half-year.
		For one watering in rabi season ..	1 4 0	0 10 0	Do.
		For two or more waterings in rabi season ...	2 8 0	1 4 0	Do.
	VIII	(i) Single watering before ploughing not followed by a canal-irrigated crop in the same or the next harvest.	0 8 0	0 4 0	Acre.
		(b) Hemp (sua) and indigo which has been ploughed as green manure before the 15th September.			
Irrigation Branch Notification No. 0157, R. I., dated 31st August 1917.	Special	Toria and gram sown together in the same field	5 0 0	2 8 0	Crop.
LOWER CHENAB CANAL.					
OCCUPIER'S RATE.					
Applicable to—					
(a) all estates in the Gujranwala District which were established before the 1st January 1892;					
(b) all estates in the Jhang District which were established before 1st January 1892, except those which were transferred from the Montgomery to the Jhang District by Revenue and Agriculture Notification No. 370 of 4th May 1899; and such proprietary wells as are now or may hereafter be included within the boundaries of the Colony mauzas;					
(c) all estates in the Gujra and Montgomery Tahsils of the Montgomery District which were established before 1st January 1891; and					
(d) all estates in the Multan and Lahore Districts which were established before 1st April 1902					

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		LOWER CHENAB CANAL—CONTINUED.			
		OCCUPIER'S RATE—continued.			
Irrigation Branch Notification No. 017 R. I., dated 13th June 1903.	I	Sugarcane, water-nuts	3 0 0	4 4 0	Crop.
	II	Rice	6 12 0	3 10 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons.	5 8 0	3 0 0	Orchards and gardens per half-year; the rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds, maize and all rabi crops (except gram and masur).	4 4 0	2 0 0	Crop. "
	V	All kharif crops not otherwise specified, and gram and masur.	3 0 0	1 12 0	Do.
Irrigation Branch Notification No. 636 R. I., dated 12th May 1913.	VI	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 12 0	1 2 0	Each watering.
		Also crops grown on the "wadk" of a previous crop.			Crop.
	VII	Single watering before ploughing for rabi followed by a rabi crop, to be applicable only to channels selected by the Local Government.	2 1 0	1 0 0	Acre.
Irrigation Branch Notification No. 0141 R. I., dated 2th October 1903.	VIII	Grass—			
		For any number of waterings in the kharif season.	1 4 0	0 10 0	Half-year.
		For one watering in the rabi season ...	1 4 0	0 10 0	Do.
		For two or more waterings in the rabi season...	2 8 0	1 4 0	Do.
Irrigation Branch Notification No. 0157 R. I., dated 31st August 1917.	Special	Toria and gram sown together in the same field.	5 0 0	2 8 0	Crop.
		<i>Applicable to estates other than those referred to in Notification No. 017 R. I., dated 13th June 1903, above.</i>			
Irrigation Branch Notification No. 32 I., dated 6th January 1892.	I	Sugarcane	7 6 0	3 12 0	Crop.
	II	Rice	6 4 0	3 2 0	Do.
	III	Orchards, gardens, tobacco, indigo, vegetables, poppy, dhania, vira, annur, melons.	5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds, maize and all rabi crops (except gram and masur)	3 12 0	1 14 0	Crop.
	V	All kharif crops not otherwise specified, and gram and masur.	2 8 0	1 4 0	Do.
Irrigation Branch Notification No. 636 R. I., dated 12th May 1913.	VI	Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest.	1 4 0	0 10 0	Each watering.
	VII	Also crops grown on the "wadk" of a previous crop.			Crop.
Irrigation Branch Notifications No. 0141 R. I., dated 12th October 1903, No. 313 R. I., dated 19th December 1905, and No. 701 R. I., dated 11th December 1907.	VIII	Grass, village plantations in Colony villages and District Board plantations in the Colony—			
		For any number of waterings in the kharif season.	1 1 0	0 10 0	Half-year.
		For one watering in the rabi season ...	1 4 0	0 10 0	Do.
		For two or more waterings in the rabi season...	2 8 0	1 4 0	Do.
Irrigation Branch Notification No. 0157 R. I., dated 31st August 1917.	Special	Toria and gram sown together in the same field...	5 0 0	2 8 0	Crop.

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per.																																																																																																																															
			Flow.	Lift.																																																																																																																																
		LOWER CHENAB CANAL—CONTINUED. OCCUPIER'S RATE—concluded. Applicable to the following estates selected by the Local Government :—	Rs. A. P.	Rs. A. P.																																																																																																																																
		<table><tr><th>Division.</th><th>District.</th><th>Settlement assessment circle.</th><th>No. of Chaks and Branch.</th></tr><tr><td>Upper Gugera.</td><td>Gujranwala</td><td>Gugera Branch I.</td><td>537, 538 and 539, Gugera Branch.</td></tr><tr><td>Lower Gugera</td><td>Lyalpur...</td><td>Ditto</td><td>71 and part of 75 and 164, Gugera Branch.</td></tr><tr><td rowspan="2">Lyalpur</td><td>Lyalpur ..</td><td>Jhang Branch I.</td><td>167 and half of 25, Jhang Branch.</td></tr><tr><td>Jhang ...</td><td>Ditto</td><td>129, 130, 137, 141, 144, 145, 153, 154, 156 and 157, Jhang Branch.</td></tr><tr><td rowspan="2"></td><td>Lyalpur...</td><td>Jhang Branch II.</td><td>324, 341, 345, 360 and 369, Jhang Branch.</td></tr><tr><td>Jhang ..</td><td>Ditto</td><td>172, 173, 175, 176, 177, 183, 209, 209, 212, 215, 216, 217, 220, 223, 217, 219, 240, 255, 267, 269, 269 and 270, Jhang Branch.</td></tr><tr><td>Jhang ...</td><td>Lyalpur.</td><td>Jhang Branch III.</td><td>367, 369, 369, 401, 402, 404, 409, 419, 411, 412, 413 and 420, Jhang Branch.</td></tr><tr><td></td><td>Jhang ...</td><td>Ditto</td><td>442, 419, 440, 447, 419, 419, 420, 451 and 461, Jhang Branch.</td></tr><tr><td>Irrigation Branch Notifica- tion No. 6275 R. I., dated 26th August 1912.</td><td>Lower Gugera.</td><td>Lyalpur ..</td><td>Gugera Branch I.</td><td>116, 207 and 210, Gugera Branch.</td><td></td></tr><tr><td></td><td>Jhang ...</td><td>Ditto ...</td><td>Jhang Branch III.</td><td>424, 331, 340, 347, 373, 409 and 410, Jhang Branch.</td><td></td></tr><tr><td></td><td>Ditto ..</td><td>Jhang ...</td><td>Jhang Branch II.</td><td>170, Jhang Branch.</td><td></td></tr><tr><td>Irrigation Branch Notifi- cation No. 911 R. I., dated 22nd January 1913.</td><td>Lower Gugera.</td><td>Lyalpur...</td><td>Gugera Branch II.</td><td>261, 265, 327, 329, 329, 310 and 350, Gugera Branch.</td><td></td></tr><tr><td></td><td>Darala ...</td><td>Ditto ..</td><td>Ditto</td><td>567, 601, 602, 603, 601, 600, 612, 616 and 610, Gugera Branch.</td><td></td></tr><tr><td>Irrigation Branch Notifica- tion No. 6301 R. I., dated 21st September 1914</td><td>Khanki ...</td><td>Gujranwala</td><td>...</td><td>11, 122 and 230, Rakh Branch.</td><td></td></tr><tr><td></td><td>Upper Gugera</td><td>Ditto ...</td><td>...</td><td>12, 13, 20, 50, 31, 34 and 40, Rakh Branch.</td><td></td></tr><tr><td></td><td>Ditto ...</td><td>Lyalpur.</td><td>...</td><td>67, 61, 127 and 100, Rakh Branch.</td><td></td></tr><tr><td></td><td>Lyalpur...</td><td>Ditto ...</td><td>...</td><td>165, 311, 317, 233, 290 and 291, Rakh Branch.</td><td></td></tr><tr><td>Irrigation Branch Notifica- tion No. 616 R. I., dated 1st June 1915.</td><td>Jhang ...</td><td>Jhang ...</td><td>...</td><td>467, 475, 470, 479, 480, 481, 491, 489, 400, 403, 409, 500, 603, 604 and 600, Jhang Branch.</td><td></td></tr><tr><td></td><td>Darala ...</td><td>Lyalpur...</td><td>...</td><td>557, 658, 691, 697, 697, 613, 618, 619, 621, 622 and 623, Darala Branch.</td><td></td></tr><tr><td></td><td>Lower Gugera</td><td>Ditto ...</td><td>...</td><td>521, Gugera Branch, Lower.</td><td></td></tr><tr><td></td><td>Upper Gugera.</td><td>Ditto ...</td><td>...</td><td>650, Gugera Branch, Upper.</td><td></td></tr><tr><td>Irrigation Branch Notifica- tion No. 112 R. I., dated 30th January 1912.</td><td>IV</td><td>Cotton, fibres, dyes, other than Indigo, oil-seed mulra, and all rabi crops except gram and masur.</td><td>3 0 0</td><td>1 12 0</td><td>Crop.</td></tr><tr><td></td><td>V</td><td>All kharif crops not otherwise specified and gram and masur</td><td>2 0 0</td><td>1 4 0</td><td>Do.</td></tr><tr><td>Irrigation Branch Notifica- tion No. 6157 R. I., dated 31st August 1917.</td><td>Special</td><td>Toria and gram sown together in the same field...</td><td>5 0 0</td><td>2 8 0</td><td>Do.</td></tr></table>	Division.	District.	Settlement assessment circle.	No. of Chaks and Branch.	Upper Gugera.	Gujranwala	Gugera Branch I.	537, 538 and 539, Gugera Branch.	Lower Gugera	Lyalpur...	Ditto	71 and part of 75 and 164, Gugera Branch.	Lyalpur	Lyalpur ..	Jhang Branch I.	167 and half of 25, Jhang Branch.	Jhang ...	Ditto	129, 130, 137, 141, 144, 145, 153, 154, 156 and 157, Jhang Branch.		Lyalpur...	Jhang Branch II.	324, 341, 345, 360 and 369, Jhang Branch.	Jhang ..	Ditto	172, 173, 175, 176, 177, 183, 209, 209, 212, 215, 216, 217, 220, 223, 217, 219, 240, 255, 267, 269, 269 and 270, Jhang Branch.	Jhang ...	Lyalpur.	Jhang Branch III.	367, 369, 369, 401, 402, 404, 409, 419, 411, 412, 413 and 420, Jhang Branch.		Jhang ...	Ditto	442, 419, 440, 447, 419, 419, 420, 451 and 461, Jhang Branch.	Irrigation Branch Notifica- tion No. 6275 R. I., dated 26th August 1912.	Lower Gugera.	Lyalpur ..	Gugera Branch I.	116, 207 and 210, Gugera Branch.			Jhang ...	Ditto ...	Jhang Branch III.	424, 331, 340, 347, 373, 409 and 410, Jhang Branch.			Ditto ..	Jhang ...	Jhang Branch II.	170, Jhang Branch.		Irrigation Branch Notifi- cation No. 911 R. I., dated 22nd January 1913.	Lower Gugera.	Lyalpur...	Gugera Branch II.	261, 265, 327, 329, 329, 310 and 350, Gugera Branch.			Darala ...	Ditto ..	Ditto	567, 601, 602, 603, 601, 600, 612, 616 and 610, Gugera Branch.		Irrigation Branch Notifica- tion No. 6301 R. I., dated 21st September 1914	Khanki ...	Gujranwala	...	11, 122 and 230, Rakh Branch.			Upper Gugera	Ditto	12, 13, 20, 50, 31, 34 and 40, Rakh Branch.			Ditto ...	Lyalpur.	...	67, 61, 127 and 100, Rakh Branch.			Lyalpur...	Ditto	165, 311, 317, 233, 290 and 291, Rakh Branch.		Irrigation Branch Notifica- tion No. 616 R. I., dated 1st June 1915.	Jhang ...	Jhang	467, 475, 470, 479, 480, 481, 491, 489, 400, 403, 409, 500, 603, 604 and 600, Jhang Branch.			Darala ...	Lyalpur...	...	557, 658, 691, 697, 697, 613, 618, 619, 621, 622 and 623, Darala Branch.			Lower Gugera	Ditto	521, Gugera Branch, Lower.			Upper Gugera.	Ditto	650, Gugera Branch, Upper.		Irrigation Branch Notifica- tion No. 112 R. I., dated 30th January 1912.	IV	Cotton, fibres, dyes, other than Indigo, oil-seed mulra, and all rabi crops except gram and masur.	3 0 0	1 12 0	Crop.		V	All kharif crops not otherwise specified and gram and masur	2 0 0	1 4 0	Do.	Irrigation Branch Notifica- tion No. 6157 R. I., dated 31st August 1917.	Special	Toria and gram sown together in the same field...	5 0 0	2 8 0	Do.
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Irrigation Branch Notifica- tion No. 6157 R. I., dated 31st August 1917.	Special	Toria and gram sown together in the same field...	5 0 0	2 8 0	Do.																																																																																																																															

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per.
			Flaw.	Lift.	
Irrigation Branch Notification No. 087 R. I., dated 6th Jnno 1916.		UPPER JHELM CANAL.	Rs. A. P.	Rs. A. P.	
		OCCUPIER'S RATE.			
	I	Cane and water-nuts	9 0 0	4 8 0	Crop.
	II	Rice	7 8 0	3 12 0	Do.
	III	Orchards, gardens, tobacco, poppy, indigo, drugs, vegetables, melons and wheat.	5 0 0	2 5 0	Orchards and gardens per half-year; rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds and all rabi crops except wheat, gram, masur, senji, moina and turrips.	4 0 0	2 0 0	Crop.
	V	All kharif crops not otherwise specified ...	3 0 0	1 8 0	Do.
	VI	(a) Gram, masur, senji, turnips and moina ...			(a) Crop.
		(b) Crops grown on the "wadā" of a previous crop			(b) Acre.
		(c) Single waterings before ploughing for rabi followed by a rabi crop to be applicable only to the following channels:—			(c) Acre.
		11 R. of Machiana kharif distributary.			
	Main Line, Upper Jhelum Canal.	12 R. or Samanpindi kharif distributary.	2 4 0	1 2 0	
		13 R. or Saroki kharif distributary.			
		14 R. or Phalia kharif distributary.			
		Gujrat Branch, Upper Jhelum Canal. } 2 L. or Phalia Doshaka kharif distributary.			
		These channels will be open only between the 1st April and 15th October, both dates inclusive.			
	VII	Grass, village and District Board plantations— For any number of waterings in the kharif season ... For one watering in rabi season ... For two or more waterings in rabi season ...	1 4 0 1 4 0 2 8 0	0 10 0 0 10 0 1 4 0	Half-year. Do. Do.
	VIII	(a) Single watering before ploughing not followed by a canal-irrigated crop in the same or next harvest. (b) Hemp (saw) and indigo which have been ploughed as green manure before the 15th September.	0 8 0	0 4 0	Acre.
Irrigation Branch Notification No. 0157 R. I., dated 31st August 1917.	Special	Toria and gram sown together in the same field...	5 0 0	2 8 0	Crop.
Irrigation Branch Notification No. 07 R. I., dated 23rd May 1902.		LOWER JHELM CANAL.			
		OCCUPIER'S RATE.			
	I	Sugarcane, water-nuts	10 0 0	5 0 0	Crop.
	II	Rice	6 4 0	3 2 0	Do.
	III	Orchards, gardens, tobacco, indigo, vegetables, drugs, poppy and melons.	5 0 0	2 8 0	Orchards and gardens per half-year; the rest per crop.
	IV	Cotton, fibres, dyes (other than indigo), oil-seeds, maize and all rabi crops except gram and masur	3 12 0	1 14 0	Crop.
	V	All other kharif crops, gram and masur, and all crops grown for fodder.	2 8 0	1 4 0	Do.
	VI	Single watering before ploughing, not followed by a canal-irrigated crop in the same or next harvest.	1 4 0	0 10 0	Each watering.
		Crops grown on the "wadā" or moisture of a previous crop.			Crop.
	VII	Single watering before ploughing for rabi followed by a rabi crop, to be applicable only to channels selected by the Local Government	2 8 0	1 4 0	Crop.
Irrigation Branch Notification No. 632 R. I., dated 12th May 1913.	VIII	Grass, village plantations in Colony villages and District Board plantations in the Colony—			
		For any number of waterings in the kharif season.	1 4 0	0 10 0	Half-year.
		For one watering in the rabi season ...	1 4 0	0 10 0	Do.
		For two or more waterings in the rabi season	2 8 0	1 4 0	Do.
	Special	Toria and grain sown together in the same field...	5 0 0	2 8 0	Crop.
Irrigation Branch Notification No. 0121 R. I., dated 21st September 1903, No. 810 R. I., dated 19th December 1905, and No. 695 R. I., dated 11th December 1907.					
Irrigation Branch Notification No. 0157 R. I., dated 31st August 1917.					

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per.
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
		LOWER JHELUM CANAL—continued.			
		OCCUPANTS' RATES—on Indus.			
		Applicable to—			
		(1) All villages or portions of villages in the River Tabal situated from the Khairi Pindir to Khairi District boundary.			
		(2) All villages in the Jhelum Tabal, except those which are within the Western and Central all villages or portions of villages situated from the Khairi Pindir to the Khairi District boundary and the Khairi District boundary.			
		(3) The following villages in the Corbett's Tabal—			
		Northern District—			
		Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 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621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 21			

**STATEMENT, SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
LOWER SOHAG AND PARA CANALS.					
OCCUPIER'S RATE.					
Irrigation Branch Notification No. 423 I., dated 7th March 1898.	I	Rice, gardens and pepper	3 4 0	1 10 0	Acre.
	II	Cotton, sugarcane, melons, til and hemp ...	2 4 0	1 2 0	Do.
	III	All other kharif crops	1 4 0	0 10 0	Do.
	IV	All matured rabi crops, plantations and vegetables.	1 0 0	0 8 0	Do.
	V	Failed rabi crops and grasses	0 8 0	0 4 0	Do.
UPPER SUTLEJ INUNDATION CANALS.					
OCCUPIER'S RATE.					
<i>Montgomery District.</i>					
Irrigation Branch Notification No. 422 I., dated 7th March 1898.	I	Rice, gardens and pepper	3 4 0	1 10 0	Acre.
	II	Cotton, sugarcane, melons, til and hemp ...	2 4 0	1 2 0	Do.
	III	All other kharif crops	1 4 0	0 10 0	Do.
	IV	All matured rabi crops, plantations and vegetables.	1 0 0	0 8 0	Do.
	V	Failed rabi crops and grasses	0 8 0	0 4 0	Do.
OCCUPIER'S RATE.					
<i>Lahore District.</i>					
Irrigation Branch Notification No. 1508 I., dated 18th April 1900.	I	Rice, gardens and pepper	3 4 0	1 10 0	Acre.
	II	Cotton, sugarcane, melons, til and hemp ...	2 4 0	1 2 0	Do.
	III	All other kharif crops	1 4 0	0 10 0	Do.
	IV	All matured rabi crops, plantations and vegetables.	1 0 0	0 8 0	Do.
	V	Failed rabi crops and grasses	0 8 0	0 4 0	Do.
SIDHNAI CANALS.					
WATER-RATE.					
<i>Kabirwala and Multan Tahsils.</i>					
Punjab Civil (Revenue) Department letter No. 269, dated 11th December 1899.	I	Rice, fruits and vegetables, pepper, cotton, til, sugarcane, wheat and tobacco.	3 5 0		
	II	Other kharif crops	2 6 0		
	III	Other rabi crops	2 2 0		
NOTE.—"Lift" rates to be half the "flow" rates.					
LOWER SUTLEJ INUNDATION CANALS.					
OCCUPIER'S RATE.					
<i>Mailsi Canals and Branches; Muhammadwah-Sardarwah and Branches; Bahawalwah, Lodhran and Branches.</i>					
Irrigation Branch Notification No. 53 R. I., dated 14th February 1903.	I	Rice, gardens and pepper	2 4 0	1 11 0	Acre of matured crop.
	II	Cotton, sugarcane and til	1 12 0	1 5 0	Ditto.
	III	Other kharif crops	1 8 0	1 2 0	Ditto.
	IV	Rabi crops	0 14 0	0 10 0	Ditto.
NOTE.—Irrigation on grass land may be assessed at half rabi rates at the discretion of the Deputy Commissioner.					

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
		CHENAB INUNDATION CANAL.	R. A. P.	R. A. P.	
		OCCUPIER'S RATE.			
		<i>Gajjuhatta, Sikkandarabad-Sikkandarwah and Bilochanwah Canals.</i>			
Irrigation Branch Notification No. 2136 L., dated 9th November 1899.	I	Rice, gardens and pepper	2 1 0	1 11 0	Area of matured crop.
	II	Cotton, sugarcane and til	1 12 0	1 5 0	Ditto.
	III	Other kharif crops	1 8 0	1 2 0	Ditto
	IV	Rabi crops	0 14 0	0 10 0	Ditto
		NOTE —Irrigation on grass lands may be assessed at half rabi rates at the discretion of the Deputy Commissioner.			
		<i>Mattital, Daurana Tangana and H'ala Muhammad Canals</i>			
Irrigation Branch Notification No. 6152 L., dated 20th September 1900.	I	Rice, gardens and pepper	2 4 0	1 11 0	Area of matured crop.
	II	Cotton, sugarcane and til	1 12 0	1 5 0	Ditto.
	III	Other kharif crops	1 8 0	1 2 0	Ditto
	IV	Rabi crops	0 14 0	0 10 0	Ditto.
		NOTE —Irrigation on grass lands may be assessed at half rabi rates at the discretion of the Deputy Commissioner.			
		HADJIWAH CANAL.			
Irrigation Branch Notification No. 238 R. L., dated 16th November 1905.	...	In exercise of the power conferred by Section 29 (1) of the Punjab Minor Canals Act, 1905 (Punjab Act III of 1905), His Honour the Lieutenant-Governor is pleased to direct that for all irrigation from the Hadjiwah Canal the following rates shall be levied <i>per acre</i> actually matured, namely:—			
		WATER RATE.			
	I	Rice, gardens and pepper	2 4 0	1 11 0	
	II	Cotton, sugarcane and til	1 12 0	1 5 0	
	III	Other kharif crops	1 8 0	1 2 0	
	IV	Rabi crops	0 11 0	0 10 0	
		Provided that on all irrigation, within the original grant of land made in the year 1880 to the late Ghulam Kadir Khan, of lands, the proprietary right in which is or may hereafter become vested—			
		(a) in the sons of lineal descendants of the said Ghulam Kadir Khan; or			
		(b) in <i>Mian Muhammad Khan or Hafiz Muhammad Afzal Khan</i> , the nephews of the said Ghulam Kadir Khan or their lineal descendants;			
		the rate <i>per acre</i> actually matured whether in the kharif or rabi shall be limited to the following rates, namely:—			
		Rs. A. P.			
		Flow 0 12 0 <i>per acre.</i>			
		Lift 0 9 0 "			

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs. A. P.	Rs. A. P.	
Irrigation Branch Notification No. 269 R. I., dated 15th November 1905.	...	HAIJIWAH CANAL—CONCLUDED. WATER RATE—concluded.			
		In exercise of the power conferred by Section 29 (1) of the Punjab Minor Canals Act (Punjab Act III of 1905), the Lieutenant-Governor is pleased to direct that the following rates shall be levied on the Haijiwah Canal in the Multan and Montgomery Districts, for the supply of water for purposes other than irrigation, viz.:—			
		<i>Purpose for which supplied.</i>			
		Brick-making and pisé wall building ...	0 3 0		100 cubic feet.
		Laying concrete or brick or stone masonry ...	0 2 0		Ditto.
Irrigation Branch Notification No. 0235 R. I., dated 19th September 1906.	...	Metalling roads ...	10 0 0		Mile.
		Water supplied in bulk ..	1 0 0		2,500 cubic feet.
		Watering roadside or avenue trees ...	2 8 0 5 0 0		Canal mile of 5,000 feet for khorif crop. Canal mile of 5,000 feet for rabi crop.
Irrigation Branch Notification No. 106 R. I., dated 30th January 1912.	...	Proviso—Except within the limits of Civil Stations, Cantonments and Municipalities no charge shall be made for water used for the manufacture of bricks not subsequently burnt in a kiln or for pisé wall building, if taken from a water-course or tank lawfully supplied from a canal, and if such bricks or walls are for buildings owned by cultivators having a share in the water-course and no rate shall be levied for water supplied in bulk, under proper authority to village tanks exclusively used for domestic purposes or for watering cattle.			
		INDUS INUNDATION CANALS. OCCUPIER'S RATE.			
			RATE PER ACRE.		
			On the Kedra Canal.	On all other canals.	
			Rs. A. P.	Rs. A. P.	
Irrigation Branch Notification No. 0376 R. I., dated 2nd October 1912.	...	Kharif flow ...	1 5 0	1 0 0	
		" lift ...	0 12 0	0 8 0	
		Rabi flow ..	0 12 0	0 5 0	
		" lift ...	0 6 0	0 4 0	
		Special rate for rice in the Dera Ghazi Khan and Janpur Tahsils ...		1 4 0	
		Provided that all lands irrigated from the Masanah Canal lying in the villages of Bori and B. Latha shall be entirely exempt from all occupier's rates and that all lands irrigated from the said canal lying in the villages of Mari Pa hali and Mari Darmiyani shall be subject to only half of the above-mentioned occupier's rates.			
		Provided also that when irrigation is done by canal and torrent or canal and river flood water mixed and no well has been done in any line without the aid of the canal, occupier's rates shall not be charged in respect of such irrigation. When, however, torrent or river flood waters are carried by the canal and managed and distributed as part of the canal supply, the above-mentioned occupier's rates shall be charged in respect of any irrigation done by such water.			

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONTINUED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
			Rs.	A. P.	
Irrigation Branch Notification No. C349 R.I., dated 4th October 1915.		INDUS INUNDATION CANALS—CONCLUDED			
		OCCUPIER'S RATE—concluded.			
		In exercise of the powers conferred by section 75 of the Northern India Canal and Drainage Act, VIII of 1873, as amended by Act IV of 1914, the Lieutenant-Governor of the Punjab is pleased to direct the publication of the following Schedule of Rates to be charged for irrigation from the Dera Ghazi Khan High Level Supply Channel, taking cut from the Manku Canal of the Indus Inundation Canals Series and for the supply of water for purposes other than irrigation—			
		All crops	0 0 0		Acre.
		<i>Miscellaneous rates for purposes other than irrigation.</i>			
		Brick-making and pié wall building ..	0 3 0		100 cubic feet.
		Laying concrete and brick or stone masonry ..	0 2 0		Ditto.
		Metalling roads	10 0 0		Mile.
		Water supplied in bulk	1 0 0		2,500 cubic feet.
		Watering roadside or avenue trees	5 0 0		Canal mile of 5,000 feet per crop.
Irrigation Branch Notification No. 1379 I., dated 10th November 1904.		SHAHPUR (IMPERIAL) INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		<i>For the Canals in Shahpur and Bhera Tahsils.</i>			
			Rs. A. P.	Rs. A. P.	
		Rice	3 8 0	1 4 0	Acre
		All other crops	2 8 0	1 4 0	Do.
		Grass lands	1 4 0	1 4 0	Do.
		SHAHPUR (PROVINCIAL) INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		<i>Ranikoth.</i>			
Settlement Report, 1897-1898, paragraph 109.		Rice	3 8 0	1 4 0	Acre.
		All other crops	2 8 0	1 4 0	Do.
		Grass lands	1 4 0	1 4 0	Do.
		<i>Corlymāh.</i>			
		All crops	1 8 0	0 12 0	Acre.
		Grass lands	0 2 0	0 1 0	Do.
		MUZAFFARHAR INUNDATION CANALS.			
		OCCUPIER'S RATE.			
		<i>Chenab Canals.</i>			
		I Rice, gardens and pepper	2 12 0	1 6 0	Acre of matured crop.
Irrigation Branch Notifications No. 052 R.I., dated 7th July 1903, and No. 100 R.I., dated 2nd February 1910.	I	Cotton, sugarcane and indigo	1 8 0	0 12 0	Ditto.
	III	Other kharif crops	1 2 0	0 9 0	Ditto.
	IV	Rabi crops	0 12 0	0 6 0	Ditto.
	V	Grass lands	0 11 0	0 3 0	Ditto.
		<i>Not.—The rate for grass land to be ascertained at the discretion of the Deputy Commissioner.</i>			
Irrigation Branch Notification No. 434 R.I., dated 4th May 1907.					

**STATEMENT SHOWING OCCUPIER'S RATE IN FORCE ON THE CANALS IN THE
PUNJAB DURING THE YEAR 1917-18—CONCLUDED.**

Authority.	Class.	Nature of crops.	RATE PER ACRE.		Per
			Flow.	Lift.	
		MUZAFFARGARH INUNDATION CANALS—CONCLUDED.	Rs. A. P.	Rs. A. P.	
		OCCUPIER'S RATE—concluded.			
		<i>Indus Canals.</i>			
Irrigation Branch Notifi- cation No. 652 R. I., dated 7th July 1903, and No. 100 R.I., dated 2nd February 1917.	I	Rice, gardens and pepper ...	2 0 0	1 0 0	Acre of matured crop.
	II	Cotton, sugarcane and indigo ...	1 0 0	0 8 0	Ditto.
	III	Other kharif crops ...	0 12 0	0 6 0	Ditto.
	IV	Rabi crops ...	0 8 0	0 4 0	Ditto.
Irrigation Branch Notifi- cation No. 431 R. I., dated 4th May 1907.	V	Grass lands ...	0 4 0	0 2 0	Ditto.
		<i>NOTE.—The rate for grass lands to be assessed at the discretion of the Deputy Commissioner.</i>			
		GHAGGAR INUNDATION CANALS (BRITISH).			
		OCCUPIER'S RATE.			
Irrigation Branch Notifi- cation No. 349 R. I., dated 27th November 1903.	I	Sugarcane ...	8 8 0	4 4 0	Acre matured per crop.
	II	Rice and water-mats ...	6 0 0	3 0 0	Ditto.
	III	All other crops ...	2 8 0	1 4 0	Ditto
		<i>PROVIDO—Provided that no occupier's rates shall be levied in respect of any land for the time being assessed to fluctuating land revenue.</i>			
		DELHI AND GURGAON WORKS.	Rate per acre.		
		OCCUPIER'S RATE	Rs. A. P.		
Irrigation Branch Notifi- cation No. 653 I., dated 6th April 1899.	...	All crops ...	0 6 4½		Acre.
		Grass ...	0 3 3½		Do.
		<i>NOTE—This schedule is the same as that pub- lished in Notification No. 253 I., dated 8th December 1873, which is hereby superseded</i>			
		SCHEDULE OF RATES FOR SUPPLY OF WATER FOR PURPOSES OTHER THAN IRRIGATION.			
		WESTERN JUMNA CANAL, UPPER BARI DOAB CANAL, FIRINGH CANAL, LOWER CHENAB CANAL, UPPER JHEUM CANAL, LOWER JHEUM CANAL, UPPER CHENAB CANAL, LOWER BARI DOAB CANAL, UPPER SUTLEJ CANALS, LOWER SONAH AND LARA CANALS, FIDHNAI AND SUBSIDIARY CANALS, LOWER SUTLEJ AND CHENAB CANALS, INDUS CANALS, MUZAFFAR- GARH CANALS, SHAHPURE CANALS.			
Irrigation Branch Notifi- cation Nos. 651 I., dated 5th April 1899, 276 R.I., dated 16th December 1902, 540 R. I., dated 22nd April 1913, 0103 R. I., dated 25th June 1913, and 0248 R. I., dated 14th September 1916.		Brick-making and pise wall building ...	0 3 0		100 cubic feet.
		Laying concrete and brick or stone masonry ...	0 2 0		Ditto.
		Metalling roads ...	10 0 0		Nil
		Water supplied in bulk ...	1 0 0		2,600 cubic feet.
Irrigation Branch Notifi- cation No. 325 R. I., dated 29th October 1906.			2 8 0		Canal mile of 5,000 feet, for kharif crop.
			5 0 0		Canal mile of 5,000 feet, for rabi crop.
Irrigation Branch Notifi- cation No. 0237 R. I., dated 28th September 1911.					
		<i>PROVIDO.—Except within the limits of Canal Stations, Cantonments and Municipalities no charge shall be made for water used for the manufacture of bricks not subsequently burnt in a kiln or for pise wall building, if taken from a water-course or tank lawfully supplied from a canal and if such bricks or walls are for buildings owned by cultivators having a share in the water-course.</i>			

PUNJAB PROVINCE.

IRRIGATION BRANCH

ADMINISTRATIVE ACCOUNTS

FOR THE YEAR

1917-18.

No. Irr. 15-4—

Dated _____ 1918.

Copy forwarded to _____

F. DUKKOFF GORDON,

Accountant-General, Punjab.

TABLE OF CONTENTS

MAJOR WORKS.

No. 1. GENERAL ABSTRACT OF FINANCIAL RESULTS: 2

Canals in operation.

WESTERN JUMNA CANAL—						
No. 2 Capital account	...	...	...	...	...	6
" 3 Revenue account	...	...	...	...	...	8
" 4 Interest account	...	...	...	...	...	11
" 5 Indirect charges account	...	...	...	...	...	11
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	12
UPPER BARI DOAB CANAL —						
No. 2 Capital account	..	...	...	...	...	13
" 3 Revenue account	...	...	...	...	...	15
" 4 Interest account	...	...	...	...	...	16
" 5 Indirect charges account	...	...	...	...	...	16

Correction statement to the Administrative Accounts, Punjab Province, Irrigation Branch, for the year 1917-18.

Page 54. No. 4—Interest account for and to end of 1917-18.

Add to :—

3rd column. " Net revenue realized to end of 1916-17."

and to 4th column. "—8,93,080."

as the first line ; and for "1,03,26,608 " in the 4th column against " Balance net interest charges " substitute "1,12,19,688 "

Page 53. No. 3—Revenue account for and to end of 1917-18—Charges.

In column previous against " Balance net revenue " for "—8,930,800 " read "—8,93,080 " and against " Grand total " for "89,90 " read "89,900."

Muhammad Ali Press, Lahore

UPPER BARI DOAB CANAL —						
No. 2 Capital account	...	...	...	...	...	11
" 3 Revenue account	...	...	...	...	...	53
" 4 Interest account	...	...	...	...	...	54
" 5 Indirect charges account	...	...	...	...	...	54
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	54

TABLE OF CONTENTS

MAJOR WORKS.

NO. 1. GENERAL ABSTRACT OF FINANCIAL RESULTS:

2

Canals in operation.

WESTERN JUMNA CANAL—						
No. 2 Capital account	...	...	...	...	...	6
" 3 Revenue account	...	...	...	...	...	8
" 4 Interest account	...	...	...	...	...	11
" 5 Indirect charges account	...	...	...	...	...	11
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	12
UPPER BARI DOAB CANAL—						
No. 2 Capital account	...	...	...	...	...	13
" 3 Revenue account	...	...	...	...	...	15
" 4 Interest account	...	...	...	...	...	16
" 5 Indirect charges account	...	...	...	...	...	16
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	16
SIRHIND CANAL—						
No. 2 Capital account	...	...	...	...	...	17
" 3 Revenue account	...	...	...	...	...	19
" 4 Interest account	...	...	...	...	...	22
" 5 Indirect charges account	...	...	...	...	...	22
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	23
LOWER CHENAB CANAL—						
No. 2 Capital account	...	...	...	...	...	24
" 3 Revenue account	...	...	...	...	...	26
" 4 Interest account	...	...	...	...	...	27
" 5 Indirect charges account	...	...	...	...	...	27
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	27
UPPER SUTLEJ INUNDATION CANALS INCLUDING LOWER SONAG AND PARA—						
No. 2 Capital account	...	...	...	...	...	28
" 3 Revenue account	...	...	...	...	...	29
" 4 Interest account	...	...	...	...	...	30
" 5 Indirect charges account	...	...	...	...	...	30
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	30
SIDHANA CANAL—						
No. 2 Capital account	...	...	...	...	...	31
" 3 Revenue account	...	...	...	...	...	33
" 4 Interest account	...	...	...	...	...	34
" 5 Indirect charges account	...	...	...	...	...	34
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	34
LOWER JHELUM CANAL—						
No. 2 Capital account	...	...	...	...	...	35
" 3 Revenue account	...	...	...	...	...	37
" 4 Interest account	...	...	...	...	...	38
" 5 Indirect charges account	...	...	...	...	...	38
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	38
INDUS INUNDATION CANALS—						
No. 2 Capital account	...	...	...	...	...	39
" 3 Revenue account	...	...	...	...	...	41
" 4 Interest account	...	...	...	...	...	42
" 5 Interest charges account	...	...	...	...	...	42
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	42
UPPER CHENAB CANAL—						
No. 2 Capital account	...	...	...	...	...	43
" 3 Revenue account	...	...	...	...	...	45
" 4 Interest account	...	...	...	...	...	45
" 5 Indirect charges account	...	...	...	...	...	46
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	46
LOWER BARI DOAB CANAL—						
No. 2 Capital account	...	...	...	...	...	47
" 3 Revenue account	...	...	...	...	...	49
" 4 Interest account	...	...	...	...	...	50
" 5 Indirect charges account	...	...	...	...	...	50
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	50
UPPER JHELUM CANAL—						
No. 2 Capital account	...	...	...	...	...	51
" 3 Revenue account	...	...	...	...	...	53
" 4 Interest account	...	...	...	...	...	54
" 5 Indirect charges account	...	...	...	...	...	54
" 6 Statement comparing charges to date with sanctioned estimate	...	...	...	...	...	54

MINOR WORKS AND NAVIGATION.

No. 1. GENERAL ABSTRACT OF FINANCIAL RESULTS.

(1).—Ordinary works of Irrigation and Navigation.

*Canals in operation.**Imperial.*

(a) Works for which Capital and Revenue accounts are kept.						Page.
SHANPUR CANALS—						
No. 2 Capital account	...	...	...	...	...	55
" 3 Revenue account	...	...	...	...	...	56
" 5 Indirect charges account	...	...	...	...	...	57
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	57
CHAGGER CANALS—						
No. 2 Capital account	...	...	...	...	...	58
" 3 Revenue account	...	...	...	...	...	60
" 5 Indirect charges account...	...	...	...	...	...	62
" 6 Statement comparing charges to date with sanctioned estimates	...	...	...	...	...	63
(b). Works for which only Revenue accounts are kept.						
LOWER SUTLEJ INUNDATION CANALS INCLUDING HAJIWAN CANALS PROJECT—						
No. 3 Revenue account	...	...	...	...	...	63
" 5 Indirect charges account...	...	...	...	...	...	64
LOWER SUTLEJ INUNDATION CANALS INCLUDING HAJIWAN CANALS—						
No. 3 Revenue account	...	...	...	...	...	65
" 5 Indirect charges account...	...	...	...	...	...	66
CHENAB INUNDATION CANALS—						
No. 3 Revenue account	...	...	...	...	...	67
" 5 Indirect charges account...	...	...	...	...	...	68
MCZAFFARGH INUNDATION CANALS—						
No. 3 Revenue account	...	...	...	...	...	69
" 5 Indirect charges account...	...	...	...	...	...	70

Provincial.

(b). Works for which only Revenue accounts are kept.						
SHANPUR CANALS—						
No. 3 Revenue account	...	...	...	...	...	71
" 5 Indirect charges account...	...	...	...	...	...	72
RAVI INUNDATION CANALS—						
No. 3 Revenue account	...	...	...	...	...	73
" 5 Indirect charges account...	...	...	...	...	...	74

ADMINISTRATIVE ACCOUNTS

No. I.—General Abstract of Financial Results showing the Estimated Cost of Construction and the Interest on the Debt incurred in respect

Name of Project.	ESTIMATED COST OF CONSTRUCTION.			CAPITAL OUTLAY INCLUSIVE OF INDIRECT			
	Direct charges.	Indirect charges.	Total.	During 1917-18.			To end of
				Direct charges.	Indirect charges.	Total.	Direct charge
1	2	3	4	5	6	7	8
PRODUCTIVE WORKS.							
<i>Canals in Operation.</i>							
<i>Imperial.</i>							
Western Jumna Canal	Rs. 1,60,69,302	Rs. 5,10,217	Rs. 1,74,79,519	Rs. —1,224	Rs. —2	Rs. —1,226	Rs. 1,65,52,312
Upper Bari Doab Canal	2,67,54,618	7,36,496	2,14,91,111	—6,316	1,235	—5,075	2,10,04,023
Sirhind Canal	2,42,62,857	12,12,405	2,54,75,262	37,555	1,065	38,620	2,44,19,219
Lower Chenab Canal	5,17,91,758	7,57,257	5,25,49,015	1,00,519	3,034	1,63,553	3,17,30,430
Upper Sutlej Inundation Canals including Lower Sohag and Parsa.	16,95,975	1,01,011	17,07,019	—2,523	..	—2,523	17,16,262
Siddhauj Canal	12,47,714	40,225	12,97,939	—3,263	..	—3,263	12,92,052
Lower Jhelum Canal	1,53,59,594	3,59,736	1,57,19,330	2,59,223	2,736	2,61,959	1,58,32,570
Indus Inundation Canals	25,42,327	50,398	25,92,725	—1,621	23	—1,598	25,00,355
Upper Chenab Canal	3,39,25,597	9,54,521	3,49,10,418	418,200	18,213	4,33,422	3,47,79,840
Lower Bari Doab Canal	2,05,90,037	4,57,503	2,14,47,540	5,74,712	12,575	5,87,287	2,19,91,985
Upper Jhelum Canal	4,20,10,166	8,56,335	4,28,66,501	11,44,206	43,570	11,87,776	4,41,55,850
TOTAL CANALS IN OPERATION—IMPERIAL	21,15,80,922	64,25,239	21,80,07,161	24,09,1	79,3,4	26,82,971	21,63,07,018
<i>Contribution.</i>							
Western Jumna Canal	11,60,476	..	11,60,476	..	..	..	11,60,476
Sirhind Canal	1,43,15,817	..	1,43,15,817	3,965	..	3,965	1,43,21,257
TOTAL CANALS IN OPERATION CONTRIBUTION	1,54,79,293	..	1,54,79,293	3,965	..	3,965	1,54,81,735

(a).—The seeming excess over estimate is due to suspense balances
 (b).—Excludes recoveries made by Native States and credited
 (c).—Excludes share of Accounts Establishment commencing from

LAHORE ;

The 5th September 1918.

DEPARTMENT.

5

PUNJAB PROVINCE.

FOR THE YEAR 1917-18.

Minor Works, the Capital outlay thereon, the Revenue derived therefrom, the working expenses, of 1917-18.

DURING 1917-18.						WORKING EXPENSES AND MAINTENANCE DURING 1917-18, INCLUSIVE OF INDIRECT CHARGES. Nos. 3 AND 5.			NET RESULTS, EXCLUDING INTEREST, DIFFERENCE BETWEEN REVENUE AND WORKING EXPENSES.				Simple Interest during 1917-18.	NET RESULTS, INCLUDING INTEREST.			
Collected with Land Revenue.			Total.			Direct charges.	Indirect charges.	Total.	Excess revenue (surplus).	Excess expenditure (deficit).	Rate per cent.			Excess revenue (surplus).	Excess expenditure (deficit).	Rate per cent.	
Actual transactions of the year.	Adjustment on account of previous year.	Total.	Actual transactions of the year.	Adjustment on account of previous year.	Total.						Of excess revenue.	Of excess expenditure.				Of excess revenue.	Of excess expenditure.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
40,395	..	40,395	1,35,551	...	1,35,551	55,069	4,522	60,408	75,080	..	34.77	...					
..	22,540	..	22,540	32,045	2,689	34,714	...	12,165	..	8.23					
40,395	...	40,395	1,58,123	...	1,58,123	88,014	7,195	95,212	75,086	12,165	10.63	...					
...	4,135	...	4,135	...	4,135	..	1.44					
3,27,573	..	3,27,573	6,69,000	..	6,69,000	2,30,201	18,404	2,52,005	4,16,806								
3,04,321	..	3,04,321	5,42,314	...	5,42,314	1,45,395	6,576	1,49,971	3,02,373								
3,98,916	...	3,98,916	6,69,061	...	6,69,061	3,18,770	16,473	3,35,243	3,04,448								
10,29,824	...	10,29,824	19,11,088	..	19,11,088	7,01,360	30,458	7,37,818	11,73,216								
10,922	..	10,922	68,493	..	68,493	43,491	4,176	47,667	20,526								
-1,776	...	-1,776	-1,776	...	-1,776	1,041	230	1,371	...	3,047							
18,150	...	18,150	66,657	..	66,657	45,072	4,400	49,476	20,820	3,047							

F. DUKOFF GORDON,

Accountant-General, Punjab.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated (Construction Estimate closed on 31st March 1896)	Expenditure against closed Estimates.
	IMPERIAL.			CONTRIBUTION.			TOTAL.				
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.		
I—WORKS.											
1. HEAD WORKS—											
B.—Land ..	4,710	—37	4,673	..	..	..	4,710	—37	4,673		
C.—Works	4,19,440	..	4,19,440	5,328	..	5,328	4,24,768	..	4,24,768		
E.—Buildings	42,311	..	42,311	..	..	..	42,311	..	42,311		
O.—Miscellaneous	13,530	..	13,530	..	..	..	13,530	..	13,530		
P.—Maintenance	24,830	..	24,830	..	..	..	24,830	..	24,830		
TOTAL	5,04,830	—37	5,04,802	5,328	..	5,328	5,10,167	—37	5,10,130		
2. MAIN CANAL AND BRANCHES											
A.—Preliminary Expenses.	50,808	..	50,808	4,580	..	4,580	55,388	..	55,388		
B.—Land ..	2,58,542	—330	2,58,212	22,250	..	22,250	2,80,462	—330	2,80,132		
D.—Regulators	2,44,050	..	2,44,050	25,671	..	25,671	2,69,721	..	2,69,721		
E.—Falls and Weirs	3,01,498	..	3,01,498	42,008	..	42,008	4,03,506	..	4,03,506		
F.—River and Hill Torrent Works.	2,740	..	2,740	1,051	..	1,051	3,800	..	3,800		
F. (1)—Other Cross Drainage Works.	2,22,017	..	2,22,017	41,137	..	41,137	2,63,154	..	2,63,154		
G.—Bridges..	8,25,808	..	8,25,808	51,270	..	51,270	8,77,078	..	8,77,078		
H.—Escapes	3,40,413	..	3,40,413	43,419	..	43,419	3,83,832	..	3,83,832		
I.—Navigation Works.	13,87,990	..	13,87,990	29,864	..	29,864	14,17,854	..	14,17,854		
J.—Mills ..	55,115	..	55,115	3,830	..	3,830	58,950	..	58,950		
K.—Buildings	6,70,953	..	6,70,953	45,175	..	45,175	7,16,128	..	7,16,128		
L.—Earthwork	19,01,367	..	19,01,367	1,96,664	..	1,96,664	20,98,031	..	20,98,031		
M.—Plantations	19,632	..	19,632	4,650	..	4,650	23,682	..	23,682		
O.—Miscellaneous	54,289	..	54,289	3,768	..	3,768	58,057	..	58,057		
P.—Maintenance	1,58,861	..	1,58,861	18,444	..	18,444	1,77,305	..	1,77,305		
TOTAL	65,55,134	—330	65,54,804	5,33,795	..	5,33,795	70,88,929	—330	70,88,599		
3.—DISTRIBUTARIES—											
A.—Preliminary Expenses.	65,053	..	65,053	12,073	..	12,073	77,126	..	77,126		
B.—Land ..	3,10,808	—36	3,10,772	6,955	..	6,955	3,17,727	—36	3,17,691		
C.—Works ..	11,87,719	..	11,87,719	1,30,920	..	1,30,920	13,18,639	..	13,18,639		
L.—Earthwork	14,05,257	..	14,05,257	1,65,612	..	1,65,612	15,70,869	..	15,70,869		
O.—Miscellaneous	3,89,890	..	3,89,890	29,350	..	29,350	4,19,240	..	4,19,240		
P.—Maintenance	51,924	..	51,924	12,585	..	12,585	64,509	..	64,509		
TOTAL	34,12,731	—36	34,12,695	3,68,403	..	3,68,403	37,81,094	—36	37,81,058		

ACCOUNTANT-GENERAL.
FOR THE YEAR 1917-18.

PUNJAB PROVINCE

Project,

AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated (Construction Estimates closed on 31st March 1905).	Expenditure against close Estimates.
	IMPERIAL.			CONTRIBUTION.			TOTAL.				
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
4. DRAINAGE AND PROTECTIVE WORKS—											
A.—Preliminary Expenses.	20,301	...	20,301	1	...	1	20,302	...	20,302		
B.—Land ...	59,225	...	59,225	...	...	...	59,225	...	59,225		
C.—Works ...	2,08,426	...	2,08,426	...	...	...	2,08,426	...	2,08,426		
L.—Earthwork ...	4,27,461	...	4,27,461	3,113	...	3,113	4,30,577	...	4,30,577		
O.—Miscellaneous ...	22,647	...	22,647	...	...	...	22,647	...	22,647		
TOTAL ...	7,38,063	...	7,38,063	3,114	...	3,114	7,41,177	...	7,41,177		
TOTAL I.—WORKS..	1,12,16,767	—403	1,12,10,364	9,00,640	...	9,00,640	1,21,11,407	—403	1,21,11,004		
Add expenditure on general works at end of 1864-65	19,24,123	...	19,24,123	..	..	..	19,24,123	..	19,24,123		
TOTAL ..	1,31,34,890	—403	1,31,34,487	9,00,640	...	9,00,640	1,40,35,530	—403	1,40,35,127	71,40,35,127	71,40,35,127
II.—ESTABLISHMENT											
5. DIRECTION (a) ...	6,02,507	—10	6,02,581	43,545	...	43,545	6,53,142	—10	6,53,120		
6. EXECUTIVE ...	24,01,205	...	24,01,205	1,57,892	...	1,57,892	25,59,087	...	25,59,087		
8. SPECIAL SURVEY...	1,31,782	...	1,31,782	6,000	...	6,000	1,37,848	...	1,37,848		
9½. SPECIAL FIELD SURVEY.	88	...	88	..	..	..	88	...	88		
LEAVE AND PENSION ALLOWANCES.	...	...	...	29,049	...	29,049	29,049	...	29,049		
TOTAL ..	31,42,672	—10	31,42,656	2,36,612	...	2,36,612	33,79,214	—10	33,79,198		
Add expenditure on general works at end of 1864-65.	1,85,590	...	1,85,590	...	...	...	1,85,590	...	1,85,590		
TOTAL ...	33,28,262	—10	33,28,216	2,36,612	...	2,36,612	35,61,801	—10	35,61,785	35,61,785	35,61,785
III.—TOOLS AND PLANT											
1. Scientific Instruments	...	...	...	...	...	...	...	...	...
2. Plant and Machinery	...	...	...	...	...	...	...	...	...
3. Tools ...	...	...	...	...	...	...	...	...	...
4. Navigation Plant ...	1,933	...	1,933	298	...	298	2,231	...	2,231		
5. Camp equipage ...	...	...	...	...	...	...	...	...	...
6. Live stock ...	...	...	...	...	...	...	...	...	...
7. Office furniture ...	...	...	...	...	...	...	...	...	...
8. Repair and Carriage	23,973	...	23,973	5,041	...	5,041	29,014	...	29,014		
12. Miscellaneous ...	1,92,114	...	1,92,114	18,429	...	18,429	2,10,573	...	2,10,573		
TOTAL ..	2,18,050	...	2,18,050	23,768	...	23,768	2,41,818	...	2,41,818	2,41,818	2,41,818
IV.—SUSPENSE ACCOUNT.											
14. STOCK ...	2,13,885	—838	2,13,047	...	...	...	2,13,885	—838	2,13,047		
15. STOCK PURCHASES	—391	83	—311	...	...	...	—391	83	—311		
15a. STOCK SALES ...	25	10	35	...	...	...	25	10	35		
16. MISCELLANEOUS ADVANCES.	299	—60	239	...	...	...	299	—60	239		
TOTAL ...	2,13,815	—806	2,13,010	...	...	...	2,13,815	—806	2,13,010		
GRAND TOTAL ..	1,68,95,017	—1,224	1,68,93,793	11,60,950	...	11,60,950	1,80,55,907	—1,224	1,80,54,683	1,78,41,733	1,78,41,730
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	11,461	...	11,461	477	...	477	11,053	...	11,053	11,053	11,053
NET TOTAL ...	1,68,83,570	—1,224	1,68,82,346	11,60,473	...	11,60,473	1,80,44,014	—1,224	1,80,42,790	1,78,30,680	1,78,30,677
APPORTIONMENT.											
40.—IRRIGATION WORKS	1,68,83,530	—1,224	1,68,82,312	11,60,478	...	11,60,478	1,80,44,014	—1,224	1,80,42,790		

Shares of accounts excluded under Imperial from 1912-13.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Western Jumna Canal Project.

No. 2.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CONTRIBUTORY.			TOTAL.		
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Kt.	Rs.	Rs.	Rs.		
Occupies' rates ..	...	29,30,839		...	...	...	...
Owners' rates' on irrigated land.	...	...	..	...	...	...	...
Sales of water ...	...	20,464		...	...		...
Supply of towns...	...	...	..	...	...	..	..
Receipts from Plantations.	...	33,504		...	501		...		
Receipts from other Canal produce.	...	485		...	...		...
Water-power ...	...	2,761		...	215		...		
Navigation Receipts.	...	52,541		...	...		
Rent of Buildings	...	7,215		...	385		...		
Fines ...	...	1,218		...	6		...		
Miscellaneous and other Receipts.	...	35,297		...	320		..		
Total ...	9,99,56,155	30,84,369	10,30,40,514	34,340	1,434	35,774	9,99,90,495	80,65,793	10,30,76,288
Share of Land Revenue collected in the Civil Department.	1,90,07,515	2,29,981	1,92,37,496	...	...		1,90,07,515	2,29,981	1,92,37,496
Interest on sale proceeds of waste lands benefited.	1,000	295	1,985	...	...		1,000	295	1,985
Total ...	1,90,09,205	2,30,276	1,92,39,481	..	...		1,90,09,205	2,30,276	1,92,39,48
TOTAL RECEIPTS...	11,89,65,860	33,14,635	12,22,79,995	84,340	1,434	35,774	11,89,99,700	83,16,069	12,23,15,769

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNT FOR THE YEAR 1917-18.

Western Jumna Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(1).—EXTENSIONS AND IMPROVEMENTS.									
(1).—HEAD WORKS	2,06,190	..	2,06,190	11,016	..	11,016	2,21,106	..	2,21,106
(2).—MAIN CANAL AND BRANCHES	13,69,025	41,635	14,10,660	2,51,819	18,826	2,70,645	16,20,874	60,461	16,81,335
(3).—DISTRIBUTARIES	7,36,925	77,431	8,16,256	55,513	..	55,513	7,92,441	77,431	8,72,872
(4).—DRAINAGE AND PROTECTIVE WORKS.	72,094	3,934	76,028	2,131	209	2,340	74,525	4,203	78,728
TOTAL I. A. ..	23,64,234	1,23,090	25,09,227	3,25,709	19,035	3,44,744	27,11,916	14,205	28,84,041
(2).—MAINTENANCE AND REPAIRS.									
(1).—HEAD WORKS	18,50,783	32,114	19,12,897	85,736	2,538	88,274	19,66,619	34,652	20,01,171
(2).—MAIN CANAL AND BRANCHES.	77,01,270	2,90,228	80,84,498	4,62,330	21,375	4,83,605	82,56,500	3,11,503	85,65,103
(3).—DISTRIBUTARIES	43,24,068	1,81,161	45,06,132	1,71,219	..	1,71,219	44,96,187	1,81,164	46,77,351
(4).—DRAINAGE WORKS.	5,78,640	67,291	6,45,937	20,605	1,358	21,963	5,99,281	68,649	6,67,900
TOTAL I. B. ..	1,45,78,667	5,70,797	1,51,49,464	7,39,700	25,271	7,65,001	1,53,18,457	5,06,068	1,59,14,525
(3).—COMPENSATION.	1,00,785	2,400	1,12,270	2,487	204	2,691	1,12,272	2,604	1,14,966
(4).—ESTABLISHMENT.									
(4).—DIRECTOR AND ACCOUNT (c)	21,66,670	59,424	22,26,103	92,571	0,058	92,629	22,59,250	59,482	23,24,732
(5).—EXECUTIVE ESTABLISHMENT	84,19,575	2,00,927	87,19,502	3,59,193	10,235	3,69,428	87,76,768	2,10,162	90,88,930
(7).—MEDICAL DO.		(b)							
(7A).—REVENUE DO.	63,77,218	2,20,255	65,97,503	1,38,666	82	1,38,748	65,15,914	2,20,337	67,33,251
(7B).—NAVIGATION ESTABLISHMENT.	17,687	481	18,168	..	..	..	17,687	481	18,168
(7C).—PLANTATION ESTABLISHMENT.	790	..	790	..	..	..	790	..	790
(7D).—LEAVE AND PENSION ALLOWANCE.	..	..	..	82,631	2,292	84,923	82,631	2,292	84,923
(7E).—MILLS AND MACHINERY.	1,123	..	1,123	..	..	..	1,123	..	1,123
TOTAL ..	1,59,83,102	68,087	1,75,63,189	9,73,001	18,666	9,91,727	1,76,56,163	5,98,753	1,82,54,916

(a). Includes Rs. 16,933 on account of seigniorage during the year. Up to date Rs. 2,35,010

(b). Rs. 83,860 on account of fees for collection of Revenue.

(c). Share of accounts excluded under Imperial from 1912-13.

(d). Rs. 6,19,270 more would have been earned had not owner's rates on certain lands irrigated been remitted in favour of Revenue assignees.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Western Jumna Canal Project.

No. 3.—REVNEUE ACCOUNT FOR AND TO END OF 1917-18—concluded.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(5)—TOOLS AND PLANT.									
(1).—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS,	1,649	1,142	2,791	..	..	..	1,649	1,142	2,791
(2).—PLANTS AND MACHINERY.	4,135	—322	3,742	..	..	..	4,135	—302	3,742
(3).—TOOLS ...	1,888	1,418	3,306	..	..	..	1,888	1,418	3,306
(4).—NAVIGATION PLANTS.	6,249	..	6,249	..	..	..	6,249	..	6,249
(5).—CART EQUIPAGE.	61	—263	—202	..	..	..	61	—263	—202
(5).—LIVE STOCK	..	471	471	..	..	..	..	471	471
(7).—OFFICE FURNITURE.	2,097	302	2,399	..	..	..	2,097	302	2,399
(12).—MISCELLANEOUS.	2,63,548	—461	2,63,087	23,214	450	23,670	2,63,762	—5	2,63,757
(8).—REPAIRS AND CARriage	2,40,259	10,658	2,50,917	522	..	522	2,40,761	10,658	2,51,439
TOTAL ..	5,39,880	12,875	5,52,755	23,736	450	24,186	5,63,022	13,321	5,76,343
(5).—REFUNDS OF REVENUE.	3,71,378	802	3,72,180	..	..	..	3,71,378	802	3,72,180
(7).—PROFIT AND LOSS.	1,295	..	1,295	..	..	..	1,295	..	1,295
General work to end of 1864-65.	48,92,523	..	48,92,523	..	..	..	48,92,523	..	48,92,523
TOTAL ..	3,08,62,873	12,90,111	4,11,52,984	17,64,763	63,633	18,28,416	4,16,27,636	13,53,744	4,29,81,400
Indirect charges debitable to Revenue Account as per Account No. 5.	27,79,766	81,412	28,61,178	..	..	..	27,79,766	81,412	28,61,178
TOTAL CHARGES	4,26,42,639	13,71,523	4,40,14,162	17,64,763	63,633	18,28,416	4,44,07,422	14,35,156	4,58,42,578
Balance, Not Revenue.	7,63,22,921	10,43,112	7,62,65,833	—17,30,419	—62,199	—17,92,642	7,45,92,276	18,80,913	7,64,73,191
GRAND TOTAL	11,89,65,560	33,14,635	12,22,70,195	31,340	1,434	35,774	11,89,99,700	33,16,069	12,23,15,76

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Western Jumna Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount.		Amount.
	Rs.		Rs.
To Interest charges to end of 1916-17 ...	2,34,60,029	Net Revenue realized to end of 1916-17 ...	7,63,23,721
Do. for the year 1917-18 ...	...	during 1917-18 ...	19,43,112
Total outlay to end of 31st March, 1918 = Rs. 1,68,82,312			
Less half outlay during 1916-17 = „ —012			
Total „ 1,68,82,324			
Interest at 3.4730 per cent ...	5,68,341		
Total ...	2,40,45,275		
Balance Revenue after defraying interest charges ...	5,42,20,400		
Total ...	7,82,65,633		7,82,65,833

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ...	2,16,561	..	2,16,561
Leave and Pension Allowances { Imperial ..	5,93,659	—2	5,93,656
{ Contribution ..	29,049	...	29,049
Total ...	8,39,269	—2	8,39,266
Leave and Pension Allowances debited to Native States treated as Direct charges and transferred to Account No. 2 of the Canal.	29,049	...	29,049
Net debit to Imperial ...	8,10,219	—2	8,10,217
REVENUE—			
Capitalization of abatement of Land Revenue ...	16,592	200	16,792
Leave and Pension Allowances { Imperial ..	27,63,174	81,212	28,44,386
{ Contribution ..	82,631	2,202	84,833
Total ...	28,62,397	83,704	29,46,101
DEDUCT—			
Leave and Pension Allowances debited to Native States treated as Direct charges and transferred to Account No. 3 of this Canal.	82,631	2,202	84,833
Net debit to Imperial Revenue ...	27,79,766	81,412	28,61,178

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Western Jumna Canal Project

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against Open Canal Sanctions.	Total.	Charges to date.	Amount of sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
IMPERIAL.								
DIRECT CHARGES.								
Works	1,02,80,277	25,44,210	1,31,34,487				1,31,34,487	
Establishment ...	27,27,223	6,01,023	33,28,246				33,28,246	
Tools and Plant ..	1,77,785	40,266	2,18,050				2,18,050	
Suspense Balance ..	...	...	...	21,80,010		-2,13,010	2,13,010	
Total ..	1,31,85,285	34,85,498	1,66,60,783	2,13,010		-2,13,010	1,68,93,793	
Less Receipts on Capital Account.	11,201	280	11,481				11,481	
Net Total ...	1,31,84,084	34,85,218	1,66,69,302	2,13,010		-2,13,010	1,68,82,312	
INDIRECT CHARGES.								
Capitalized of abatement of Land Revenue.	1,53,167	63,304	2,16,561	...	..	...	2,16,561	
Leave and Pension Allowances.	5,12,001	81,662	5,93,656	...	...	...	5,93,656	
Total ...	6,65,201	1,44,956	8,10,217	...	...	...	8,10,217	
GRAND TOTAL ...	1,38,49,345	36,30,174	1,74,79,519	2,13,010		-2,13,010	1,76,92,529	
CONTRIBUTION								
DIRECT CHARGES.								
Works	8,34,341	66,299	9,00,640				9,00,640	
Establishment ...	2,17,498	19,044	2,36,542				2,36,542	
Tools and Plant ..	22,814	954	23,768				23,768	
Total ...	10,74,653	86,297	11,60,950				11,60,950	
Less Receipts on Capital Accounts.	472	...	472			-	472	
Net Total ...	10,74,181	86,297	11,60,478				11,60,478	
GRAND TOTAL ...	10,74,181	86,297	11,60,478				11,60,478	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Bari Doab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1890.)	Expenditure against closed Estimate.
	Imperial.				
	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
1.—WORKS.					
1. HEAD WORKS—					
B.—Land	—56	—175	—231		
C.—Works	8,20,496	3,002	8,23,558		
K.—Buildings	65,958	..	65,958		
TOTAL ..	8,86,368	2,857	8,89,255		
2. MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	8,180	..	8,180		
B.—Land	1,43,610	—1,525	1,41,785		
D.—Regulators	3,52,039	..	3,52,039		
F.—Falls and Weirs	19,49,184	..	19,49,184		
I.—River and Hill Torrent Works	5,39,998	..	5,39,998		
F. (1) —Other Cross Drainage Works	1,18,245	..	1,18,245		
G.—Bridges	8,52,439	..	8,52,439		
H.—Escapes	6,38,733	..	6,38,733		
J.—Navigation Works	4,78,588	..	4,78,588		
S.—Mills	1,47,530	..	1,47,530		
K.—Buildings	10,83,161	835	10,84,002		
L.—Earthwork	39,00,053	696	39,00,749		
M.—Plantations	95,475	..	95,475		
O.—Miscellaneous	7,14,097	10,360	7,24,457		
P.—Maintenance	75,872	..	75,872		
TOTAL ..	1,10,07,513	10,069	1,11,07,582		
3. DISTRICTS—					
A.—Preliminary Expenses	24,333	..	24,333		
B.—Land	3,68,760	—751	3,68,015		
C.—Works	16,28,141	1,661	16,29,505		
L.—Earthwork	16,08,384	..	16,08,384		
O.—Miscellaneous	3,10,819	—3,309	3,16,510		
P.—Maintenance	8,354	..	8,354		
Add Dinanagar Navigation Channel	35,776	..	35,776		
Shahpur Water Course	63,427	..	63,427		
Lahore City Rajbaha	12,721	..	12,721		
TOTAL ..	41,59,754	—2,306	41,57,358		
Total carried over ..	1,61,43,535	10,800	1,61,54,195		

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Bari Doab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18—*concl.*

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1890).	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
I.—WORKS—CONTINUED.					
Brought over ..	1,61,43,635	10,560	1,61,54,195		
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses ..	530	...	530		
B.—Land ..	6,519	..	6,510		
C.—Works ..	28,908	...	28,908		
L.—Earthwork ..	90,247	...	90,247		
O.—Miscellaneous ..	1,163	..	1,163		
TOTAL ..	1,33,374	...	1,33,374		
TOTAL I.—WORKS ..	1,62,77,009	10,560	1,62,87,569	1,63,06,706	1,63,88,338
II.—ESTABLISHMENT.					
5. Direction (a) ..	8,48,322	175	8,48,497		
6. Executive ..	26,08,961	8,613	26,17,604		
7. Medical ..	5,465	..	5,465		
TOTAL ..	34,62,748	8,818	34,71,566	34,60,022	34,59,024
III.—TOOLS AND PLANT.					
2. Plant and Machinery ..	3,881	9,309	13,140		
4. Navigation Plant ..	22	..	22		
8. Repairs and Carriage ..	2,360	...	2,360		
Miscellaneous ..	9,10,030	763	9,10,849		
TOTAL ..	9,16,290	10,072	9,26,371	9,14,842	9,11,076
IV.—SUSPENSE ACCOUNT.					
14. Stock ..	4,62,304	3,181	4,65,485		
15. Stock Purchases ..	—5,219	—11,252	—16,471		
15a. Stock Sales ..	696	209	805		
16. Miscellaneous Advances ..	3,550	—2,315	1,211		
18. London Stores ..	...	4,417	4,417		
TOTAL ..	4,61,237	—35,760	4,25,477		
GRAND TOTAL ..	2,11,17,293	—6,310	2,11,10,983	2,07,71,570	2,07,58,438
V.—LESS RECEIPTS ON CAPITAL ACCOUNT ..	16,955	..	16,955	16,955	16,955
NET TOTAL ..	2,11,00,338	—6,310	2,10,94,028	2,07,54,615	2,07,41,483
APPORTIONMENT.					
49—Irrigation Works ..	2,11,00,338	—6,310	2,10,94,028		

(a). Share of accounts excluded from 1912 13.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Bari Doab Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	TOTAL
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Oscpiers' rates ...	10,02,60,617	38,88,916	10,41,49,563	(1)—EXTENSIONS AND IMPROVEMENTS.			
Owners' rates on irrigated land.	8,575	..	8,575	1.—HEAD WORKS ..	3,87,123	21,712	4,08,835
Sales of water ...	7,66,532	39,517	8,06,049	2.—MAIN CANAL AND BRANCHES	14,77,593	12,716	11,90,309
Supply of towns ...	3,577	50	3,627	3.—DISTRIBUTARIES ..	12,87,056	31,101	13,18,217
Receipts from Plantations.	10,75,528	41,275	11,16,803	4.—DRAINAGE AND PROTECTIVE WORKS.	1,88,111	4,241	1,92,352
Receipts from other Canal produce.	2,42,440	4,194	2,46,634	TOTAL (1) ..	33,39,982	61,960	34,01,942
Water-power ..	44,17,193	1,07,823	45,25,016	(2)—MAINTENANCE AND REPAIRS			
Navigation Receipts ..	5,477	..	5,477	1.—HEAD WORKS ...	47,59,180	92,591	48,51,771
Rent of Buildings ..	..	7,019	..	2.—MAIN CANAL AND BRANCHES	90,37,081	2,76,504	93,13,585
Fines ..	10,03,143	2,186	17,51,287	3.—DISTRIBUTARIES ..	45,68,001	1,55,100	47,23,107
Miscellaneous and other Receipts.	..	1,37,969	..	4.—DRAINAGE WORKS ...	1,27,182	8,000	1,35,182
Total ..	10,53,83,061	42,33,249	11,26,16,310	TOTAL (2) ..	1,84,92,014	5,12,173	1,90,04,187
Share of Land Revenue collected in the Civil Department.	1,55,00,961	6,42,008	1,61,43,069	(3)—COMPENSATION.	40,322	281	40,603
Interest on sale-proceeds of waste lands benefited.	8,19,281	71,250	8,90,531	(4)—ESTABLISHMENT.			
Total ..	1,63,20,253	7,13,258	1,70,33,511	5.—DIRECTION AND ACCOUNTS (a)	23,29,222	62,518	(a) 23,91,740
TOTAL RECEIPTS ...	12,47,03,314	49,46,597	12,96,49,911	6.—EXECUTIVE ESTABLISHMENT ..	56,27,005	3,57,246	59,84,251
				7.—MEDICAL Do. ..	1,23,319	5,908	1,29,227
				7 A.—REVENUE Do. ...	70,83,695	2,47,427	(b) 73,31,122
				7 C.—PLANTATION Do ..	10,18,562	..	10,18,562
				7 D.—LEAVE AND PENSION ALLOWANCES.	52	..	52
				TOTAL ..	1,82,03,558	6,33,499	1,88,37,057
				(5)—TOOLS AND PLANT.			
				1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	925	519	1,444
				2.—PLANT MACHINERY ..	8,183	72	8,255
				3.—TOOLS ..	2,530	717	3,247
				4.—NAVIGATION PLANT ..	713	144	857
				5.—CAMP EQUIPAGE ..	121	56	177
				6.—LIVE STOCK ..	627	800	1,427
				7.—OFFICE FURNITURE ..	251	46	297
				8.—REPAIRS AND CARRIAGE ..	3,03,913	15,95	3,19,868
				9.—MISCELLANEOUS ..	3,60,211	—1,222	3,59,089
				TOTAL (5)—TOOLS AND PLANT	6,86,357	16,067	7,02,424
				(6)—REFUNDS OF REVENUE.	1,71,914	4,46	1,72,360
				(7)—PROFIT AND LOSS.	1,073	..	1,073
				TOTAL ..	4,09,11,121	12,48,780	4,21,59,901
				Indirect charges debitable to Revenue Account as per Account No. 5.	28,57,625	91,810	29,49,435
				TOTAL CHARGES ..	4,38,01,016	13,33,000	4,51,34,016
				Balance, Not Revenue ..	8,09,01,868	36,07,907	8,45,09,775
				GRAND TOTAL ..	12,47,03,314	49,46,597	12,96,49,911

(a). Share of Accounts excluded from 1912-13.

(b). Includes Rs. 1,11,386 on account of fees for collection of revenue.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.
Upper Bari Doab Canal Project.
No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount		Amount
	Rs.		Rs.
Total Interest charges to end of 1916-17 ..	3,52,71,980	Net Revenue realized to end of 1916-17 ...	8,09,01,668
Do. for the year 1917-18 ..		Do. during 1917-18 ..	30,07,907
Total outlay to end of March 1918 = Rs 2,10,94,028			
Less half outlay during 1917-18 = „ —3,155			
Mean Capital at charge = „ 2,10,97,183	7,32,702		
Interest at 3.4730 per cent on above ..			
Total ..	3,60,01,686		
Balance Revenue after defraying Interest charges..	4,85,01,979		
Total ..	8,45,09,665	Total ..	8,45,09,665

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars	Previous	1917-18.	Total
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue	20,001	..	20,001
Leave and Pension Allowances	7,16,359	1,235	7,17,594
Total	7,37,020	1,235	7,38,255
REVENUE—			
Capitalization of abatement of Land Revenue	20,000	350	20,440
Leave and Pension Allowances	28,37,426	91,490	29,28,916
Total	20,57,625	91,840	20,49,365

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.		
	Expendi- ture against Construc- tion Estimate	Expendi- ture against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		Authority.	No. and date.	Amount.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.				
DIRECT CHARGES—										
Works	1,24,50,791	39,37,547	1,63,88,338	1,00,769	8,368	1,09,137	1,62,87,569	Secy., I.B. " S. E.	193 W.I. 5-2-18 731 W.I 4-2-13 308 20-1-16 7370 22-11-18 1835 22-3-18	5,711 3,606 877 2,658 230
Establishment ...	27,91,452	6,67,572	34,59,024	12,512	908	—11,544	34,71,566			
Tools and Plant ..	4,98,215	4,12,861	9,11,076	15,295	3,766	—11,529	9,26,371			
Suspense Balances ..	..	..	..	4,25,477	..	—4,25,477	4,25,477			
Total	1,57,40,458	50,17,980	2,07,58,438	3,52,545	13,132	—3,39,413	2,11,10,983			
Less Receipts on Capital Account.	16,955	..	..	..	..	..	16,955			
Net Total ...	1,57,23,503	50,17,980	2,07,41,483	3,52,545	13,132	—3,39,413	2,10,94,028		Total	13,132
INDIRECT CHARGES—										
Capitalized abatement of Land Revenue.	8,381	12,280	20,661	..	..	..	20,661			
Leave and Pension Allowances.	6,22,375	93,400	7,15,835	1,759	..	—1,759	7,17,594			
Total ...	6,30,756	1,05,740	7,36,496	1,759	..	—1,759	7,34,255			
GRAND TOTAL ..	1,63,54,259	51,23,720	7,15,843	3,64,304	13,132	—3,41,172	2,18,32,883			

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sirhind Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated (Construction Estimate closed on 31st March).	Expenditure against closed Estimates.
	IMPERIAL.			CONTRIBUTION.			TOTAL.				
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
I.—WORKS.											
1. HEAD WORKS—											
A.—Preliminary Expenses.	463	..	463	272	..	272	755	..	755		
B.—Land ..	7,063	..	7,063	3,074	..	3,074	11,037	..	11,037		
C.—Work ..	9,40,928	..	9,40,928	6,59,273	..	5,29,273	14,70,201	..	14,70,201		
E.—Buildings ..	72,011	6,022	77,503	40,623	3,100	43,620	1,12,604	6,028	1,21,192		
O.—Miscellaneous ..	72,301	..	72,301	3,536	..	3,536	77,342	..	77,342		
P.—Maintenance ..	21,101	..	21,101	13,550	..	13,550	37,603	..	37,603		
TOTAL ..	1,16,724	6,022	11,23,316	6,01,139	3,100	6,91,246	17,09,562	8,028	17,18,100		
2.—MAIN CANAL AND BRANCHES.											
A.—Preliminary Expenses.	23,536	..	23,536	10,309	..	10,309	42,034	..	42,034		
B.—Land ..	5,50,850	..	5,50,850	2,51,332	..	2,51,332	8,14,212	..	8,14,212		
D.—Regulators ..	4,18,720	..	4,18,720	2,95,027	..	2,95,027	7,13,747	..	7,13,747		
E.—Falls and Weirs..	7,71,838	..	7,71,838	3,07,000	..	3,07,000	11,72,817	..	11,72,817		
F.—(1).—Other Cross Drainage Works.	12,32,587	..	12,32,587	10,41,540	..	10,41,540	22,74,136	..	22,74,136		
G.—Bridges ..	8,08,405	7,056	8,16,381	4,80,672	..	4,80,672	12,98,077	7,056	13,00,033		
H.—Escapes ..	1,80,680	..	1,80,680	1,03,313	..	1,03,313	2,89,999	..	2,89,999		
I.—Navigation Works	17,47,254	—10,057	17,31,197	3,81,346	..	3,84,346	21,31,900	—10,057	21,15,643		
J.—Mills ..	41,613	..	41,613	..	..	..	41,613	..	41,613		
K.—Buildings ..	9,44,930	6,907	9,50,893	3,10,346	..	3,10,346	12,55,801	6,907	12,61,208		
L.—Earthwork ..	48,70,003	..	48,70,003	31,61,014	..	31,61,014	80,37,707	..	80,37,707		
M.—Plantations ..	1,20,812	..	1,20,812	1,04,358	..	1,04,358	2,25,170	..	2,25,170		
N.—Tanks and Reservoirs.	1,910	..	1,910	..	..	..	1,910	..	1,910		
O.—Miscellaneous ..	87,807	..	87,807	77,387	..	77,387	1,65,284	..	1,65,284		
P.—Maintenance ..	2,27,821	..	2,27,821	2,00,076	..	2,00,076	4,36,890	..	4,36,890		
TOTAL ..	1,20,53,038	—2,104	1,20,50,814	68,48,325	..	8,48,325	1,60,01,363	—2,104	1,58,00,100		
3.—DISTRIBUTARIES—											
A.—Preliminary Expenses.	51,008	..	51,008	39,471	..	39,471	91,379	..	91,379		
B.—Land ..	3,86,536	..	3,86,536	72,601	..	72,601	4,59,137	..	4,59,137		
C.—Works ..	14,08,001	..	14,08,001	7,65,007	..	7,65,007	22,03,008	..	22,03,008		
L.—Earthwork ..	16,57,316	..	16,57,316	9,77,712	..	9,77,712	26,35,786	..	26,35,786		
O.—Miscellaneous ..	2,55,485	..	2,55,485	17,803	..	17,803	2,32,888	..	2,73,288		
P.—Maintenance ..	..	..	..	..	..	..	..	..	..
TOTAL ..	37,59,876	..	37,59,876	19,02,674	..	19,02,674	50,02,550	..	50,02,550		
TOTAL CARRIED OVER ..	1,60,31,337	3,328	1,60,34,665	93,42,138	3,100	93,45,244	2,62,73,470	6,434	2,62,79,904		

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sirhind Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18—(Continued.)

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated. (Construction Estimate closed on 31st March 1918.)	Expenditure against closed Estimates.
	IMPERIAL.			CONTRIBUTION.			TOTAL.				
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I.—WORKS.—(Contd.) Brought Over ...	1,69,31,337	3,329	1,69,34,666	93,42,136	3,106	93,45,242	2,62,73,479	6,134	2,62,79,613		
(4). DRAINAGE AND PROTECTIVE WORKS.											
A.—Preliminary Expenses.	31	...	31	17	...	17	68	...	68		
B.—Land	55,982	...	55,982	44,536	...	44,536	1,00,518	...	1,00,518		
C.—Works	3,303	...	3,303	1,858	...	1,858	5,161	...	5,161		
L.—Earthwork	5,31,372	...	5,31,372	4,24,082	...	4,24,082	9,55,464	...	9,55,464		
O.—Miscellaneous	...	...	...	...	...	...	...	...	...
P.—Maintenance	2,622	...	2,622	1,475	...	1,475	4,007	...	4,007		
TOTAL	5,93,310	...	5,93,310	4,71,978	...	4,71,978	10,65,288	...	10,65,288		
TOTAL I.—WORKS	1,75,21,417	3,329	1,75,24,746	98,14,116	3,106	98,17,222	2,73,38,763	6,144	2,73,44,907	2,74,08,241	2,73,39,809
II.—ESTABLISHMENT.											
5. DIRECTION	—982	1,507	525	867	187	1,054	—117	1,694	1,577		
6. EXECUTIVE	46,53,969	5,692	46,59,661	26,29,383	526	26,29,909	74,63,352	6,220	74,69,572		
7. MEDICAL	...	...	...	...	...	...	...	...	...
8. SPECIAL SURVEY	...	...	...	...	...	...	...	...	...
9. SPECIAL FIXED SURVEY.	...	...	...	...	...	...	...	...	...
LEAVE AND PENSION ALLOWANCES.	...	...	...	5,40,053	100	5,40,153	5,40,053	10	5,40,163		
TOTAL	46,52,987	7,199	46,60,186	33,70,303	817	33,71,120	80,23,290	8,014	80,31,304	80,39,053	80,30,410
III.—TOOLS AND PLANT.											
9. NAVIGATION PLANT	...	...	...	...	...	...	...	...	...
10. MILL PLANT	...	...	...	...	...	...	...	...	...
11. RAILWAY PLANT AND ROLLING STOCK.	...	...	...	...	...	...	...	...	...
12. MISCELLANEOUS	21,05,117	503	21,05,620	11,00,910	47	11,00,957	32,96,027	550	32,96,577		
13. REPAIRS AND CARRIAGE.	...	...	...	...	...	...	...	...	...
LOSS BY EXCHANGE	2,740	...	2,740	10,568	...	10,568	13,308	...	13,308		
TOTAL	2,10,757	503	2,11,260	12,01,478	47	12,01,525	33,09,335	550	33,09,885	33,10,536	33,09,033
IV.—SUSPENSE ACCOUNT.											
Stock	2,03,439	24,559	2,27,998	...	...	...	2,03,439	24,559	2,27,998		
14. STOCK PURCHASES	—350	265	—85	...	...	...	—350	265	—85		
15. STOCK SALES	—5	1,932	1,927	...	...	...	—5	1,932	1,927		
16. MISCELLANEOUS ADVANCES.	593	—227	366	...	...	...	593	—227	366		
17. LONDON INVOICES	...	...	...	...	...	...	...	...	...
18. LONDON STORES	...	...	...	...	...	...	...	...	...
TOTAL	2, 3,687	26,520	2,30,216	...	...	...	2,03,687	26,520	2,30,216		
GRAND TOTAL	2,44,89,176	37,559	2,45,26,735	1,43,55,897	3,968	1,43,59,865	3,86,76,076	41,527	3,87,17,603	3,87,57,830	3,86,80,144
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	1,07,518	...	1,07,518	68,604	...	68,604	1,76,126	...	1,76,126		
NET TOTAL	2,43,81,660	37,559	2,44,19,219	1,43,17,293	3,968	1,43,21,267	3,85,00,950	41,527	3,87,40,476		
APPORTIONMENT.											
49.—IRRIGATION WORK	2,43,81,660	37,559	2,44,19,219	1,43,17,293	3,968	1,43,21,267	3,85,00,950	41,527	3,87,40,476		
43.—M. W. AND NAVIGATION IMPERIAL.											
PROVINCIAL.											

(a). Share of accounts excluded from 1913-14.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sirhind Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Occupiers' rates	7,27,80,771	30,51,721	7,58,32,492	13,876	4,127	17,803	7,27,04,447	80,55,848	7,68,50,295
Sales of water	4,13,270	20,436	4,32,706	18,855	...	18,855	4,31,125	20,436	4,51,561
Supply of towns	1,489	...	1,489	..	..	...	1,489	..	1,489
Receipts from Plantations ...	4,57,145	20,469	4,95,604	2,10,096	17,041	2,38,037	6,88,141	47,100	7,35,241
Receipts from other Canal produce	1,81,200	4,692	1,85,958	1,03,293	...	1,03,293	2,84,559	4,092	2,89,251
Water power	10,88,852	74,200	20,63,052	8,08,797	31,562	8,30,359	26,87,640	1,05,702	29,93,411
Navigation Receipts	2,21,470	10,999	2,32,469	1,09,255	5,080	1,15,235	3,30,725	16,979	3,47,704
Rent of Buildings	1,18,905	5,741	1,24,736	49,595	1,783	51,378	1,68,590	7,524	1,76,114
Fines	46,769	488	47,344	516	...	516	47,278	488	47,700
Miscellaneous and other Receipts	16,64,791	1,40,135	18,04,926	46,513	8,217	48,880	17,81,404	1,42,352	18,53,756
Total	7,78,33,808	33,37,868	8,12,21,676	14,61,598	63,310	15,24,908	7,93,45,404	34,01,178	8,27,46,582
Share of Land Revenue collected in the Civil Department.	2,95,855	98,174	3,94,029	...	..	..	2,95,855	98,174	3,94,029
Interest on sale-proceeds of waste land benefited.	...	...	..	..	..	..	..	..	..
TOTAL RECEIPTS	7,81,79,663	34,36,042	8,16,15,705	14,61,598	63,310	15,24,908	7,96,41,259	34,99,352	8,31,40,611

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sirhind Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(1).—EXTENSIONS AND IMPROVEMENTS.									
(1)—HEAD WORKS ..	2,20,669	817	2,21,376	1,23,905	400	1,24,305	3,44,464	1,277	3,45,741
(2)—MAIN CANAL AND BRANCHES	10,56,038	17,850	10,73,888	10,18,745	1,35,824	20,54,569	20,74,783	1,53,674	31,28,457
(3) DISTRIBUTARIES ...	7,44,390	51,877	7,96,267	14,262	...	14,262	7,58,652	51,877	8,10,529
(4)—DRAINAGE AND PROTECTIVE WORKS.	41,477	—112	41,365	22,260	...	22,260	65,727	—112	65,615
TOTAL (1) ...	20,65,464	70,432	21,35,896	20,70,162	1,36,284	22,15,446	41,44,626	2,06,716	43,51,342
(2).—MAINTENANCE AND REPAIRS.									
(1)—HEAD WORKS ...	7,73,159	17,085	7,90,244	4,30,354	10,115	4,40,469	12,03,623	28,101	12,31,724
(2)—MAIN CANAL AND BRANCHES	43,07,478	3,63,147	46,70,625	25,61,116	2,12,921	27,74,036	68,66,593	5,76,068	74,42,661
(3)—DISTRIBUTARIES ...	45,71,607	1,44,063	47,15,670	356	...	356	45,72,178	1,44,063	47,16,236
(4)—DRAINAGE WORKS ..	5,27,301	6,273	5,33,574	3,27,939	5,400	3,33,339	8,55,240	11,673	8,66,913
TOTAL (2) ..	1,01,79,745	5,31,468	1,07,11,213	32,19,784	2,28,487	35,48,271	1,24,99,629	7,59,905	1,42,59,424
(3).—COMPENSATION ...	36,351	..	36,351	13,447	...	13,447	49,798	..	49,798
(4).—ESTABLISHMENT.									
(1).—DIRECTION AND ACCOUNT ..	11,71,302	46,391	12,17,693	3,69,679	22,322	3,91,901	15,40,971	68,713	16,09,684
(2).—EXECUTIVE ESTABLISHMENT	49,15,620	2,44,318	51,59,938	18,77,567	83,351	19,60,918	67,93,187	3,27,699	71,20,886
(3).—MEDICAL Do. ...	1,70,353	10,504	1,80,857	57,163	2,789	59,952	2,36,516	13,383	2,49,899
(4).—REVENUE Do. ..	55,30,469	2,42,030	57,72,499	11,357	1,302	12,659	55,41,856	2,43,332	57,85,188
(5).—NAVIGATION Do. ...	21,077	268	21,345	...	...	...	21,077	268	21,345
(6).—LEAVE AND PENSION ALLOWANCE, (14 PER CENT. ON Rs. 1,09,764.)	..	...	...	3,25,021	15,367	3,40,388	3,25,021	15,367	3,40,388
TOTAL ..	1,18,17,011	5,43,631	1,23,60,642	26,40,717	1,25,131	27,65,848	1,44,58,628	6,68,762	1,51,27,390
TOTAL CARRIED OVER ..	2,40,99,471	11,46,631	2,52,46,102	80,53,110	4,89,852	85,42,962	3,21,52,581	16,35,353	3,37,87,934

(a). Includes foreignage amounting to Rs. 1,31,055 during the year and up to date Rs.

(b). Includes Rs. 1,04,286 on account of fees for collection of Revenue.

(c). Share of account under Imperial excluded from 1914-15.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sirhind Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

CHARGES.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Total brought over ...	2,40,00,471	11,46,531	2,52,45,002	80,53,110	4,80,852	85,42,962	3,21,52,581	10,36,383	3,37,87,964
(5).—TOOLS AND PLANT.									
(1).—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	1,285	5,535	6,820	910	35	945	2,196	5,570	7,766
(2).—PLANT AND MACHINERY ..	1,820	8,651	10,477	1,548	503	2,051	3,374	9,154	12,528
(3).—TOOLS ..	6,707	5,003	11,710	2,270	431	2,701	8,977	5,434	14,411
(4).—NAVIGATION ..	4,699	2,339	7,038	2,850	381	3,231	7,549	2,720	10,269
(5).—CAMP EQUIPAGE ...	10,666	3,478	14,143	8,873	...	8,873	19,538	3,478	23,016
(6).—LIVE STOCK ...	...	...	...	...	...	...	...	...	...
(7).—OFFICE FURNITURE ...	2,314	700	3,014	1,311	112	1,423	3,624	812	4,436
(8).—REPAIRS AND CARriage ...	1,66,071	18,452	1,74,523	57,448	829	68,277	2,23,519	19,281	2,42,800
MISCELLANEOUS ...	3,01,940	—11,430	2,90,510	1,01,909	10,872	1,12,781	4,03,840	—558	4,03,291
TOTAL ...	4,86,607	32,728	5,18,235	1,37,119	13,163	2,00,282	6,72,026	45,891	7,18,517
(6).—REFUNDS OF REVENUE	79,621	1,023	80,644	6,566	213	6,779	86,087	1,230	87,323
(7).—PROFIT AND LOSS ..	372	...	372	88	...	88	457	...	457
(8).—SUSPENSE ACCOUNT ...	...	...	...	...	8,046	8,046	...	3,046	3,046
MISCELLANEOUS ADVANCES ...	...	...	...	...	...	...	...	...	...
STOCK ...	...	...	...	18,032	—804	17,168	18,032	—804	17,169
STOCK SALES ...	...	...	...	...	177	177	...	177	177
STOCK PURCHASES ...	...	...	...	...	...	...	...	...	...
TOTAL SUSPENSE ACCOUNT ..	...	...	...	18,032	2,359	20,391	18,032	2,359	20,391
TOTAL ...	2,46,84,671	11,79,282	2,58,44,153	82,04,012	5,05,587	87,70,499	3,29,29,788	16,84,860	3,46,14,652
Indirect Charges debitable to Revenue Account as per Account No. 5.	16,02,602	76,233	17,38,835	...	...	...	16,02,602	76,233	17,38,835
TOTAL CHARGES ...	2,63,27,473	12,55,516	2,75,82,989	82,04,914	5,05,587	87,70,499	3,45,92,385	17,61,102	3,63,53,487
BALANCE, NET REVENUE ...	5,18,52,190	21,80,527	5,40,32,717	—68,03,310	—4,42,377	—72,45,693	1,50,48,874	17,38,260	4,67,87,124
GRAND TOTAL ..	7,81,79,003	34,80,042	8,16,15,705	14,01,508	83,310	15,24,006	7,96,41,250	34,99,352	8,11,10,011

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sirhind Canal Project.

No. 4—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1916-17 ..	3,39,13,149	Net Revenue realized to end of 1916-17 ..	5,18,52,190
Do. for the year 1917-18 ..		Do. during 1917-18 ..	21,80,527
	Rs.		
Total outlay to end of March 1918 = 2,44,19,29			
Less half outlay during 1917-18 = 18,779			
Mean Capital at charge = 2,44,00,440			
Interest at 3.4730 per cent ...	8,47,487		
TOTAL ..	3,47,80,576		
Balance Revenue after defraying Interest charges	1,02,42,141		
TOTAL ..	5,40,32,717	TOTAL ...	5,40,32,717

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

PARTICULARS,	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ..	3,30,099	..	3,30,099
Leave and Pension Allowances .. { Imperial	8,91,054	1,008	8,92,062
.. { Contribution	5,40,053	100	5,40,153
Total ..	17,51,206	1,108	17,52,314
Deduct Leave and Pension allowances debited to Native States treated as direct charges and transferred to Account No. 2 of the canal.	5,40,053	100	5,40,153
Net debitable to Imperial Canal ..	12,11,153	1,008	12,12,161
REVENUE—			
Capitalization of abatement of Land Revenue ..	8,098	126	8,223
Leave and Pension Allowances .. { Imperial	16,54,504	76,108	17,30,612
.. { Contribution	3,25,021	15,367	3,40,388
Total ...	19,87,623	91,600	20,79,223
Deduct Leave and Pension allowances debited to Native States treated as direct charges and transferred to Account No. 3 of the canal.	3,25,021	15,367	3,40,388
Net Imperial Revenue ..	16,62,602	76,233	17,38,835

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sirhind Canal Project.

No. 6—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
IMPERIAL.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
DIRECT CHARGES—								
Works ..	1,56,33,573	18,98,322	1,75,22,505	5,930	48,410	63,000	1,75,27,975	Soc'y's No. 002-W.I. 18-5-17 = 8,534
Establishment ..	42,71,854	3,90,095	46,61,949	-1,763	8,643	10,406	46,60,186	" 8761 W. I. 25-7-47 = 5,450
Tools and Plant..	20,52,851	25,321	21,08,175	185	603	418	21,08,380	" 794 W. I. 4-3-48 = 3,858
Suspense Balances	...	...	..	2,30,210	...	-2,80,216	2,30,210	G. I. No. 604 I. 8-11-17 = 60,014
Total ..	2,10,88,381	23,04,338	2,42,00,719	2,34,018	77,656	-1,56,332	2,45,26,737	Total = 77,686
Less Receipts on Capital Account.	1,07,518	...	1,07,518	..	...	...	1,07,518	
Net Total ..	2,16,80,863	23,04,338	2,41,85,201	2,34,018	77,686	-1,56,332	2,44,10,210	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue.	3,15,270	4,820	3,20,090	...	..	...	3,20,090	
Leave and Pension Allowances.	8,37,094	54,815	8,92,309	-247	..	247	8,92,062	
Total ..	11,52,973	59,435	12,12,408	-247	..	247	12,12,161	
GRAND TOTAL ..	2,30,33,836	23,63,773	2,53,97,609	2,33,771	77,686	-1,56,085	2,56,31,360	
CONTRIBUTION.								
DIRECT CHARGES—								
Works ..	93,60,025	4,46,181	98,17,206	16	...	-16	98,17,222	
Establishment ..	32,60,604	1,01,857	33,68,461	2,657	...	-2,657	33,71,118	
Tools and Plant..	11,05,980	5,778	12,01,758	-233	...	233	12,01,525	
Suspense Balances	...	...	..	...	..	..	...
Total ..	1,38,31,900	5,55,816	1,43,87,426	2,440	..	-2,440	1,43,89,866	
Less Receipts on Capital Account.	68,608	15	68,608	..	..	..	68,608	
Net Total ...	1,37,03,016	5,55,801	1,42,18,817	-2,440	..	-2,440	1,43,21,257	
GRAND TOTAL ...	1,37,03,016	5,55,801	1,43,18,817	2,440	..	-2,440	1,43,31,257	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Chenab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1900).	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.		
I.—WORKS.					
1.—HEAD WORKS—					
A.—Preliminary Expenses	5,710	..	5,710		
B.—Land	64,105	..	64,105		
C.—Works	53,53,866	1,19,347	54,73,213		
K.—Buildings	97,901	..	97,901		
O.—Miscellaneous	6,084	..	6,084		
P.—Maintenance	1,68,784	..	1,68,784		
TOTAL ..	56,36,460	1,19,347	58,15,707		
2.—MAIN CANAL AND BRANCHES—					
A.—Preliminary expenses ..	1,26,369	..	1,26,369		
B.—Land ..	2,15,279	—21,766	1,93,513		
D.—Regulators ..	11,02,116	8,775	11,10,890		
E.—Falls and Weirs ..	6,18,284	..	6,18,284		
F. (1).—Other Cross Drainage Works ..	6,87,002	..	6,87,002		
G.—Bridges ..	10,60,607	..	10,60,607		
H.—Escapes	5,42,313	..	5,42,313		
J.—Mills	73,020	..	73,020		
K.—Buildings ..	17,06,082	4,752	17,10,834		
L.—Earthwork ..	75,26,511	2,622	75,29,033		
M.—Plantations ..	1,39,734	..	1,39,734		
O.—Miscellaneous ..	4,02,424	—5,557	3,96,867		
P.—Maintenance ..	1,05,047	..	1,05,047		
TOTAL ..	1,43,04,787	—11,284	1,42,93,503		
3.—DISTRIBUTARIES—					
A.—Preliminary Expenses ..	1,38,580	276	1,38,856		
B.—Land ..	1,22,993	6,701	1,29,784		
C.—Works ..	18,40,507	10,705	18,51,212		
L.—Earthwork ..	27,14,807	14,073	27,28,880		
O.—Miscellaneous ..	4,79,141	85,586	5,64,727		
P.—Maintenance	34,570	..	34,570		
TOTAL ..	53,30,596	1,17,437	54,48,035		

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Chenab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1900).	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses	19,771		19,771		
B.—Land	24,602		24,602		
C.—Works	47,444		47,444		
L.—Earthwork	1,78,730		1,78,730		
O.—Miscellaneous	37,530		37,530		
P.—Maintenance	1,162		1,162		
TOTAL ..	3,09,267		3,09,267		
TOTAL I.—WORKS ..	2,56,41,102	2,23,500	2,58,68,002	2,61,91,772	2,49,98,744
II.—ESTABLISHMENT.					
5. DIRECTION	12,42,352	3,973	(a) 12,46,325		
6. EXECUTIVE	35,09,744	17,517	35,27,261		
7. MEDICAL	62,175		62,175		
8. SPECIAL SURVEY.. ..					
8½. SPECIAL FIELD SURVEY					
LEAVE AND PENSION ALLOWANCES					
TOTAL ..	48,14,271	21,490	48,35,761	48,87,632	46,79,620
III.—TOOLS AND PLANT.					
9. NAVIGATION PLANT					
10. MILL PLANT					
11. RAILWAY PLANT AND ROLLING STOCK	15,000		15,000		
12. MISCELLANEOUS	5,22,191	1,546	5,23,737		
13. REPAIRS AND CARRIAGE	1,02,328		1,02,328		
LOSS BY EXCHANGE					
TOTAL ..	6,39,519	1,546	6,41,065	7,27,039	6,44,464
IV.—SUSPENSE ACCOUNT.					
14. STOCK	4,93,120	—95,720	3,97,406		
15. „ PURCHASES.. ..	—5,720	3,048	—2,678		
15 (a) „ SALES	73	645	718		
16. MISCELLANEOUS ADVANCES	10,958	4,165	15,123		
17. LONDON INVOICES					
18. „ STORES					
TOTAL ..	4,98,431	—67,862	4,10,569		
GRAND TOTAL ..	3,15,93,323	1,60,674	3,17,53,997	3,18,06,843	3,03,22,728
V.—LESS RECEIPTS ON CAPITAL ACCOUNT ..	14,403	156	14,559	14,558	14,558
NET TOTAL ..	3,15,78,920	1,60,519	3,17,39,439	3,17,91,785	3,03,08,170
APPORTIONMENT.					
49.—IRRIGATION WORKS	3,15,64,510	1,60,519	3,17,25,029		
43.—M. W. AND NAVIGATION, IMPERIAL ..	14,410		14,410		

(a). Excludes share of accounts commencing from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Chenab Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	INTERNAL.			CHARGES.	INTERNAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ...	13,15,07,053	54,61,199	14,00,28,282	(1)—EXTENSIONS AND IMPROVEMENTS.			
				1.—HEAD WORKS ..	17,23,191	50,617	17,73,809
				2.—MAIN CANAL AND BRANCHES	12,57,122	77,358	13,34,480
Owners' rates on irrigated land.	58,13,828	..	58,13,828	3.—DISTRICT OFFICES ..	15,41,132	95,713	16,36,845
				4.—DRAINAGE AND PROTECTIVE WORKS.	1,54,410	37,332	1,91,742
Sales of water ...	2,68,747	26,553	3,15,310	TOTAL (1) ..	46,75,856	2,61,120	49,36,976
				(2)—MAINTENANCE AND REPAIRS			
Supply of towns ...	18,557	4,615	23,172	1.—HEAD WORKS ..	19,08,002	1,27,109	20,35,201
				2.—MAIN CANAL AND BRANCHES	59,25,828	4,01,292	63,27,120
Receipts from Plantations.	1,80,758	17,556	2,04,613	3.—DISTRICT OFFICES ..	46,55,418	2,57,036	49,12,454
				4.—DRAINAGE & PROTECTIVE WORKS.	90,604	17,517	1,08,121
Receipts from other Canal produce.	81,497	1,723	83,220	TOTAL (2) ..	1,55,79,942	8,85,954	1,64,65,896
				(3)—COMPENSATION.	1,08,975	1,382	1,10,357
Water power ..	2,83,107	13,673	2,96,780	(4)—ESTABLISHMENT.			
				5.—DISBURSEMENT AND ACCOUNT ..	12,82,553	77,613	(a) 13,50,166
Cost of Buildings ..	2,21,248	12,536	2,33,784	6.—EXECUTIVE ESTABLISHMENT ..	71,78,259	5,04,156	76,82,415
				7.—MEDICAL Do. ..	3,30,215	24,073	(a) 1,04,288
				7 A.—REVENUE Do. ..	50,08,035	(b) 1,15,557	51,23,592
				TOTAL (3) ..	1,74,49,065	11,22,409	1,85,71,474
				(5)—TOOLS AND PLANT.			
Vines ..	33,705	2,062	35,767	1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	2,475	608	3,083
				2.—PLANT AND MACHINERY ..	18,043	5,211	23,254
				3.—TOOLS ..	13,548	4,259	17,807
Miscellaneous and other Receipts.	4,38,455	17,389	4,55,844	4.—NAVIGATION PLANT ..	1,030	337	1,367
				5.—CAMP EQUIPAGE ..	2,376	—525	1,851
TOTAL ..	13,89,32,932	55,57,613	14,74,90,567	6.—LIVE STOCK ..	329	1,315	1,644
				7.—OFFICE FURNITURE ..	4,437	2,919	7,356
				8.—MISCELLANEOUS ..	4,64,160	—240	4,63,920
				9.—REPAIRS AND CARRIAGES ..	2,61,613	17,075	2,78,688
				10.—MILL PLANT ..	5,809	..	5,809
				11.—RAILWAY PLANT AND ROLLING STOCK.	54,079	..	54,079
Share of Land Revenue collected in the Civil Department.	4,61,95,314	57,56,922	5,19,52,236	TOTAL ..	8,18,354	31,934	8,50,288
Interest on sale-proceeds of waste lands benefited	69,13,895	9,19,170	78,33,065	(6)—REFUNDS OF REVENUE.	1,18,096	52	1,18,148
				TOTAL ..	3,87,50,292	23,03,271	4,10,53,563
				Indirect charges debitable to Revenue Account as per Account No. 5.	24,46,118	1,57,705	26,03,823
Total ..	5,31,09,109	67,06,092	5,98,15,201	TOTAL CHARGES ..	4,11,96,410	24,61,033	4,36,57,443
				Balance, Not Revenue ..	15,08,45,661	1,28,02,804	16,36,48,465
TOTAL RECEIPTS ...	19,20,42,071	1,52,63,697	20,73,05,768	GRAND TOTAL	19,20,42,071	1,52,63,697	20,73,05,768

(a). Excludes share of accounts commencing from 1912-13.

(b). Includes Rs. 241,303 on account of Lambardars' fees for collection of Revenue.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Chenab Canal Project.

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1916-17 ..	2,37,08,610	Net Revenue realized to end of 1916-17 ..	15,09,45,661
Do. for the year 1917-18 ..	...	Do. during 1917-18 ..	1,28,02,664
Total outlay to end of 31st March, 1918 = Rs. 3,17,30,439			
Less half the outlay during 1917-18 = " 80,269			
Mean Capital at charge = " 3,16,69,180			
Interest at 3.4730 per cent ..	10,30,523		
Total ..	2,48,00,142		
Balance Revenue after defraying interest charges ..	13,83,42,183		
Total ..	16,36,48,225	Total ..	16,36,48,225

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ..	1,02,219	25	1,02,244
Leave and Pension Allowances ..	6,73,879	3,099	6,76,888
Total ..	7,76,098	3,034	7,79,132
REVENUE—			
Capitalization of abatement of Land Revenue ..	3,280	625	3,875
Leave and Pension Allowances ..	24,42,863	1,57,137	26,00,000
Total ..	24,46,118	1,57,762	26,03,880

No. 6. STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE

Particulars.	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expendi- ture against Construc- tion Estimate.	Expendi- ture against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ..	1,99,23,202	50,76,642	2,49,99,744	8,67,865	11,93,023	3,25,170	2,68,66,602	G. I. 5201 = 1,75,752
Establishment ..	36,40,066	10,39,451	46,79,520	1,56,241	2,09,012	51,771	48,35,761	Do. 8-4-13 5241 = 1,72,701
Tools and Plant ..	5,92,825	51,639	6,44,464	—3,399	82,675	86,074	8,41,065	Do. 16-4-14 608 L = 2,25,338
Suspense Balances				4,10,769		—4,10,669	—4,10,669	Do. 0-4-14 1226 I = 1,48,607
Total ..	2,41,56,003	61,69,635	3,03,22,728	14,31,230	14,83,615	52,346	3,17,83,097	Do. 25-4-14 55 I = 96,164
Less Receipts on Capital Account	14,403	155	14,558	...	..	..	14,558	Do. 16-1-16 01375 W. I = 11,105
Net Total ..	2,41,41,600	61,66,480	3,03,08,179	14,31,230	14,83,615	52,346	3,17,39,439	Do. 16-9-15 1038 W. I = 2,148
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue.	92,069	10,185	1,02,244	..	..	..	1,02,244	G. I. 0656 I = 1,76,935
Leave and Pension Allowances.	5,03,490	1,45,523	6,55,013	21,875		—21,875	6,76,888	Do. 27-9-16 2981 W. I = 33,068
Total ..	6,01,549	1,55,708	7,57,257	21,875		—21,875	7,70,132	L. G. 1-11-16 775 I = 3,12,064
								L. G. 21-11-16 73 W. I = 754
								Do. 5-12-16 1795 W. I = 2,541
								Do. 13-4-17 297 = 26,116
								G. I. 26-4-17 3277 = 6,389
								L. G. 8-12-17 3281 = 17,056
								Do. 8-12-17 3283 = 22,471
								Do. 8-12-17 3279 = 10,638
								Do. 8-12-17 3285 = 17,813
								Do. 8-12-17 3275 = 12,214
								Do. 8-12-17 3192 = 13,544
								Total .. 14,83,615
GRAND TOTAL ..	2,47,43,239	63,22,188	3,10,65,427	16,53,144	14,83,615	30,471	3,25,18,571	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Sutlej Inundation Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES. -			Cost of construction as now estimated (Construction Estimate closed on 31st March).	Expenditure against closed Estimate.
	IMPERIAL				
	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
I.—WORKS.					
2.—MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	3,849	..	3,849		
B.—Land	43,518	..	43,518		
D.—Regulators	30,512	..	30,512		
E.—Falls and Weirs	69,015	..	69,015		
G.—Bridges	52,492	..	52,492		
K.—Buildings	2,20,883	..	2,20,883		
L.—Earthwork	5,62,555	..	5,62,555		
O.—Miscellaneous	5,112	..	5,112		
P.—Maintenance	2,457	..	2,457		
TOTAL	9,50,723	..	9,50,723		
3.—DISTRIBUTARIES—					
A.—Preliminary Expenses	3,812	..	3,812		
B.—Land	45,782	..	45,782		
C.—Works	82,970	..	82,970		
L.—Earthwork	2,35,365	..	2,35,365		
O.—Miscellaneous	22,911	..	22,911		
P.—Maintenance	4,662	..	4,662		
TOTAL	3,95,512	..	3,95,512		
TOTAL I.—WORKS.	13,76,235	..	13,76,235	13,76,235	13,76,235
II.—ESTABLISHMENT.					
5.—DIRECTION (a)	54,009	..	54,009		
6.—EXECUTIVE	2,37,350	..	2,37,350		
7.—MEDICAL	2,963	..	2,963		
TOTAL	2,95,212	..	2,95,212	2,95,212	2,95,212
III.—TOOLS AND PLANT.					
12.—MISCELLANEOUS	24,573	..	24,573		
13.—REPAIRS AND CARRIAGE	114	..	114		
TOTAL	24,687	..	24,687	24,687	24,687
IV.—SUSPENSE ACCOUNT.					
14.—STOCK	22,662	—2,472	20,190		
14(a).—STOCK PURCHASES .. ..	..	—1	—1		
15.—STOCK SALES	3	64	67		
16.—MISCELLANEOUS ADVANCES	162	—114	48		
TOTAL	22,627	—2,523	20,304		
GRAND TOTAL.	17,18,901	—2,523	17,16,438	16,96,131	16,96,134
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	156	..	156	156	156
NET TOTAL	17,18,805	—2,523	17,16,282	16,95,978	16,95,978
APPORTIONMENT.					
49.—IRRIGATION WORKS	9,28,598	—2,523	9,26,375		
43.—M. W. AND NAVIGATION—PROVINCIAL	7,89,907	..	7,89,907		

(a). Share of accounts excluded from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Sutlej Inundation Canals Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rate ...	87,93,181	4,84,491	92,77,672	(1) EXTENSIONS AND IMPROVEMENTS.			
Owners' rates on irrigated land.	17,732	...	17,732	(2).—MAIN CANAL & BRANCHES.	4,24,961	7,712	4,32,673
Sales of water ..	3,109	68	3,177	(3).—DISTRIBUTARIES ...	1,83,952	4,474	1,88,426
Receipts from Plantations	1,29,793	3,364	1,33,157	(4).—DRAINAGE AND PROTECTIVE WORKS.	1,158	...	1,158
Receipts from other Canal Produce.	75,592	927	76,519	TOTAL (1) ..	6,10,071	12,186	6,22,257
Rent of Buildings ..	6,957	1,315	8,272	(2).—MAINTENANCE AND REPAIRS.			
Fines ...	2,25,141	325	2,25,466	(1).—HEAD WORKS ..	10,379	..	10,379
Miscellaneous and other Receipts.	31,618	8,018	39,636	(2).—MAIN CANAL & BRANCHES	49,77,807	1,70,266	51,48,073
Contribution ...	22,835	...	22,835	(3).—DISTRIBUTARIES ..	9,27,519	31,058	9,58,577
Total ..	93,05,958	4,98,508	98,04,466	TOTAL (2) ...	50,15,706	2,01,324	61,17,029
Share of Land Revenue collected in the Civil Department.	77,04,906	2,45,901	79,50,807	(3).—COMPENSATION ..	8,695	...	8,695
Interest on sale-proceeds of waste lands benefited,	80,700	5,827	86,527	4.—ESTABLISHMENT			
Total ...	77,94,606	2,51,728	80,46,334	(5).—DIRECTION AND ACCOUNT.	(a) 7,08,139	12,619	7,20,758
				(6).—EXECUTIVE ESTABLISHMENT.	22,84,975	75,396	23,60,371
				(7).—MEDICAL ESTABLISHMENT	40,845	1,291	42,136
				7 (A) —REVENUE ESTABLISHMENT.	13,79,272	56,287	14,35,569
				TOTAL ..	44,13,231	1,45,593	45,58,824
				(5).—TOOLS & PLANT			
				(1).—SCIENTIFIC INSTRUMENTS.	625	98	723
				(2).—PLANTS AND MACHINERY.	...	..	..
				(3).—TOOLS ..	1,077	—20	1,037
				(4).—NAVIGATION PLANT	916	..	916
				(5).—CAMP EQUIPAGE ...	78	99	177
				(6).—LIVE STOCK ..	...	...	..
				(7).—OFFICE FURNITURE	647	51	698
				(8).—REPAIRS AND CARRIAGE	26,806	775	27,581
				MISCELLANEOUS ...	46,209	...	46,209
				TOTAL ...	76,358	1,003	77,361
				(6).—REFUNDS OF REVENUE.	23,804	2	25,806
				7.—PROFIT AND LOSS	379	..	379
				TOTAL ...	1,10,50,243	3,60,108	1,14,10,351
				Indirect Charges debitable to Revenue Account as per Account No. 5.	6,86,967	22,208	7,09,175
				TOTAL CHARGES ..	1,17,37,210	3,82,316	1,21,19,526
				Balance, Net Revenue ...	53,63,364	3,67,920	57,31,274
TOTAL RECEIPTS ...	1,71,00,564	7,50,236	1,78,50,800	GRAND TOTAL ...	1,71,00,564	7,50,236	1,78,50,800

(a). Share of accounts excluded from 1912-13.

(b). Includes Rs. 10,288 on account of fees for collection of revenue.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Sutlej Inundation Canals Project

No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1916-17 ..	22,23,165	Net Revenue realized to end of 1916-17 ...	53,63,354
Do. for the year 1917-18 ...	—	during 1917-18 ..	3,67,520
Total outlay to 31st March 1918 ..	17,16,252		
Less half outlay during 1917-18 ..	—1,201		
Mean Capital at charge ..	17,17,543		
Interest at Rs. 3·4730 per cent. ...	59,050		
Total Interest charges ..	22,52,815		
Balance Revenue after defraying Interest charges ..	31,43,489		
Total ...	57,31,274	Total ...	57,31,274

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

PARTICULARS.	Previous.	1917-18.	TOTAL.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue ...	58,033	..	58,033
Leave and Pension Allowances	43,008	..	43,008
Total ..	1,01,041	..	1,01,041
REVENUE—			
Capitalization of abatement of Land Revenue ...	10,548	1,825	12,473
Leave and Pension Allowances	6,77,319	20,368	6,94,087
Total ..	6,87,867	22,193	7,09,175

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.
	Expenditure against Construction Estimate.	Expenditure against open current sanctions	Total.	Charges to date	Amount of Sanctioned Estimate.	Un-kept Balance of Estimate.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—							
Works ...	10,07,561	3,68,174	13,76,235	...	...	...	13,76,235
Establishment ..	2,21,769	70,453	2,92,212	...	..	...	2,92,212
Tools and Plant ...	20,068	4,615	24,683	...	...	...	24,683
Suspense Balance ...	..	..	..	20,304	...	—20,304	20,304
Total ..	12,52,698	4,43,540	16,96,134	20,304	..	—20,304	17,16,133
Less Receipts on Capital Account ...	156	..	156	...	...	..	156
Not Total ..	12,52,422	4,43,540	16,95,973	20,304	...	—20,304	17,16,282
INDIRECT CHARGES—							
Capitalized abatement of Land Revenue ...	58,033	4,362	59,038	...	...	...	58,033
Leave and Pension Allowances	33,148	9,860	43,008	..	..	...	43,008
Total ...	86,829	14,212	1,01,041	...	..	...	1,01,041
GRAND TOTAL ..	13,30,251	4,67,752	17,97,019	20,304	..	—20,304	18,17,323

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sidhnai Canal Project.

No 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEAD OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1892)	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total		
I—WORKS.					
1. HEAD WORKS—					
A.—Preliminary Expenses	754	..	754		
B.—Land	235	...	235		
C.—Works	2,46,260	..	2,46,260		
K.—Buildings	11,646	..	11,646		
O.—Miscellaneous	391	:	391		
Total	2,59,286	..	2,59,286		
2. MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	4,014	..	4,014		
B.—Land	22,422	...	22,422		
D.—Regulators	49,568	..	49,568		
G.—Bridges	44,980	..	44,980		
K.—Buildings	80,789	..	80,789		
L.—Earthwork	2,58,996	..	2,58,996		
M.—Plantations	821	..	821		
O.—Miscellaneous	427	..	427		
F.—Maintenance	5,394	..	5,394		
TOTAL	4,67,411	..	4,67,411		
DISTRIBUTARIES—					
A.—Preliminary Expenses	2,965	..	2,965		
B.—Land	11,387	..	11,387		
C.—Works	66,622	...	66,622		
L.—Earthwork	1,36,784	..	1,36,784		
O.—Miscellaneous	165	..	165		
TOTAL	2,18,923	..	2,18,923		

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sidhna Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEAD OF ACCOUNT.	DIRECT CHARGES.]			Cost of construction as now estimated (Construction Estimate closed on 31st March 1892)	Expenditure against closed Estimates—
	Imperial.				
	Previous.	1917-18	Total.		
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses	36	..	36		
TOTAL	36	..	36		
TOTAL I.—WORKS	9,45,656	..	9,45,656	9,45,656	9,45,656
II.—ESTABLISHMENT.					
5.—DIRECTION	(a) 49,502	..	(a) 49,502		
6. EXECUTIVE	2,14,741	..	2,14,741		
7. MEDICAL					
TOTAL	2,64,243	..	2,64,243	2,64,243	2,64,243
III.—TOOLS AND PLANT.					
12. MISCELLANEOUS	38,039	..	38,039		
13. REPAIRS AND CARRIAGE					
TOTAL	38,039	..	38,039	38,039	38,039
IV.—SUSPENSE ACCOUNT.					
14. STOCK PURCHASES	—1,210	+699	—511		
15a. STOCK SALES	725	—162	563		
16. MISCELLANEOUS ADVANCES	861	+267	1,128		
17. STOCK	47,175	—4,067	43,108		
TOTAL	47,551	—3,263	44,288		
GRAND TOTAL	12,95,459	—3,263	12,92,226	12,47,938	12,47,938
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.					
NET TOTAL	12,95,265	—3,263	12,92,002	12,47,714	12,47,714
APPORTIONMENT.					
42.—IRRIGATION WORKS	12,76,959	—3,263	12,73,696		
43. " M. W. AND NAVIGATION	18,306	..	18,206		
	IMPERIAL				
	PROVINCIAL				

(a). Excluding share of accounts commencing from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sidhna Canal Project.

No. 3--REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous	1917-18.	Total.		Previous.	1917-18.	Total.
				1.—EXTENSIONS AND IMPROVEMENTS	31,339	928	32,267
Occupiers rates	94,84,768	5,41,271	1,00,26,039	1—HEAD WORKS	...	..	..
				2—MAIN CANAL AND BRANCHES	1,76,523	1,468	1,77,991
Sales of water	44,788	293	45,081	3—DISTRIBUTARIES	80,817	5,300	86,117
				4—DRAINAGE AND PROTECTIVE WORKS	508	..	508
Receipts from Plantations	5,983	552	6,535	TOTAL I	2,89,187	7,696	2,96,883
				2—MAINTENANCE AND REPAIRS			
Receipts from other Canal produce.	9,043	469	9,512	1—HEAD WORKS	3,40,721	10,899	3,51,620
				2—MAIN CANAL AND BRANCHES	9,32,650	29,743	9,62,393
				3—DISTRIBUTARIES	5,29,099	13,368	5,42,467
				TOTAL I, B	18,02,460	54,010	18,56,470
Rent of Buildings	18,977	202	19,179	3—COMPENSATION	231	...	231
				4—ESTABLISHMENT	(a)		
Fines	7,666	755	8,421	5—DIRECTION AND ACCOUNT	1,50,308	4,636	1,54,944
				6—EXECUTIVE ESTABLISHMENT	8,25,967	37,804	8,63,771
Miscellaneous and other Receipts	15,050	1,261	16,311	7—MEDICAL ESTABLISHMENT	19,149	1,324	20,473
				8—REVENUE ESTABLISHMENT	6,33,850	38,892	6,72,742
				TOTAL	16,29,274	82,656	17,11,930
Total	95,86,275	5,44,807	1,01,31,078	5—TOOLS AND PLANT			
				1—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	584	862	1,446
Share of Land Revenue collected in the Civil Department.	17,28,936	1,36,191	18,65,127	2—PLANT AND MACHINERY	291	..	291
				3—TOOLS	120	258	378
Interest on sale proceeds of waste lands benefited	3,42,647	20,964	3,63,613	4—NAVIGATION PLANT	1,036	647	1,683
				5—CAMP EQUIPAGE	221	43	264
				6—LIVESTOCK	...	...	...
				7—OFFICE FURNITURE	468	449	917
				8—REPAIRS AND CARRIAGE	32,699	1,053	33,752
				12—MISCELLANEOUS	21,344	—477	20,867
				TOTAL	56,763	2,835	59,598
				6—REFUNDS OF REVENUE	1,970	335	2,305
				TOTAL	37,79,883	1,47,532	39,27,417
				Indirect Charges debitable to Revenue Account as per Account No 5	2,28,383	11,572	2,39,955
Total	20,71,561	1,57,157	1,23,50,818	TOTAL CHARGES	40,08,268	1,59,104	41,67,372
TOTAL RECEIPTS	1,16,57,858	7,01,960	1,23,59,818	Balance, Net Revenue	76,49,590	5,42,856	81,92,446
				GRAND TOTAL	1,16,57,858	7,01,960	1,23,59,818

(a) Share of Accounts excluded from 1912-13.

(b) Includes Rs 5,940 on account of fees for collection of Revenue

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Sidhnai Canal Project.

No 4—INTEREST ACCOUNT FOR AND TO END OF 1917-18

	Amount		Amount.
	Rs		Rs.
Total Interest charges to end of 1916-17	13,27,956	Net Revenue realized to end of 1916-17	76,44,590
Do for the year 1917-18		Do during 1917-18	5,42,856
Total outlay up to 31st March 1918	12,92,002		
Less half outlay during 1917-18	—1,611		
Mean Capital at charge	12,93,633		
Interest at 3 4/30 per cent	44,928		
Total	13,72,984		
Balance Revenue after defraying interest charges	68,19,562		
Total	81,92,446	Total	81,92,446

No 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18,

PARTICULARS	Previous	1917-18	Total.
CAPITAL—			
Capitalization of abatement of Land Revenue	3,328	..	3,328
Leave and Pension Allowances	36,897	..	36,897
Total	40,225	..	40,225
REVENUE—			
Capitalization of abatement of Land Revenue	285	..	285
Leave and Pension Allowances	2,28,098	11,572	2,39,670
Total	2,28,383	11,572	2,39,955
GRAND TOTAL	2,68,608	11,572	2,80,180

No 6—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS			Total charges to date against old and current sanctions.	REMARKS
	Expenditure against Construction Estimate	Expenditure against open canal sanctions	Total	Charges to date	Amount of Sanctioned Estimate.	Unspent Balance of Estimate		
DIRECT CHARGES—								
Works	7,61,204	2,44,452	9,45,656	..	..	..	9,45,656	
Establishment	2,04,803	59,440	2,64,243	..	..	..	2,64,243	
Tools and Plant	22,263	16,786	39,049	..	..	..	39,049	
Suspense Balance	..	..	..	44,288	..	—44,288	44,288	
TOTAL	9,28,200	3,19,678	12,47,878	44,288	..	—44,288	12,02,226	
Less Receipts on Capital Account.	224	..	224	..	..	..	224	
NET TOTAL	9,28,036	3,19,678	12,47,714	44,288	..	—44,288	12,02,002	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue	2,994	33	3,328	..	..	..	3,328	
Leave and Pension Allowances.	28,576	8,321	36,897	..	..	..	36,897	
TOTAL	31,570	8,354	40,225	..	..	..	40,225	
GRAND TOTAL	9,89,606	3,28,033	12,87,639	44,288	..	—44,288	13,32,227	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT GENERAL

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Jhelum Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated.	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total.		
				Rs.	Rs.
I—WORKS.					
1.—HEAD WORKS—					
A.—Preliminary Expenses	12,619	..	12,619		
B.—Land	31,772	..	31,772		
C.—Works	29,70,361	2,10,031	31,80,392		
K.—Buildings	1,31,089	3,853	1,34,942		
O.—Miscellaneous	19,273	..	19,273		
P.—Maintenance	28,020	..	28,020		
TOTAL	31,93,134	2,13,884	34,07,018		
2.—MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	93,523	160	93,683		
B.—Land	2,49,781	..	2,49,781		
D.—Regulators	2,71,286	..	2,71,286		
E.—Falls and Weirs	2,34,947	..	2,34,947		
F.—(1)—Other Cross Drainage Works	1,20,258	..	1,20,258		
G.—Bridges	6,91,284	..	6,91,284		
H.—Escapes	4,78,540	..	4,78,540		
J.—Mills	1,07,620	..	1,07,620		
K.—Buildings	10,38,418	9,211	10,47,629		
L.—Earthwork	22,93,007	..	22,93,007		
M.—Plantations	86,179	..	86,179		
O.—Miscellaneous	46,457	..	46,457		
P.—Maintenance	32,373	..	32,373		
TOTAL	57,43,673	9,371	57,53,044		
3.—DISTRIBUTARIES—					
A.—Preliminary Expenses	61,101	..	61,101		
B.—Land	1,46,709	224	1,46,933		
C.—Works	15,36,318	10,231	15,46,549		
L.—Earthwork	13,39,365	13,198	13,52,563		
O.—Miscellaneous	5,57,540	1,664	5,59,204		
P.—Maintenance	4,663	..	4,663		
TOTAL	36,45,696	25,317	36,71,013		

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Jhelum Canal Project,

No 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated	Expenditure against closed Estimates
	Imperial				
	Previous	1917-18.	Total		
	Rs	Rs.	Rs	Rs	Rs
4—DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses	21 356	...	21,356		
B—Land	13,638	..	13 638		
C—Works	2,884	..	2,884		
L—Earthwork	52,353	...	52,353		
O—Miscellaneous	1,759	...	1,759		
TOTAL	91 990	..	91 990	...	
TOTAL I—WORKS	1,26,74,493	2,48,572	1 29 23 065	1,28 60 655	1 26 77,702
II—ESTABLISHMENT.					
5—DIRECTION,	6,02,411	4,093	6,06,504		
6—EXECUTIVE	15,16,752	15,464	15,32,216		
7—MEDICAL	29 633	...	29,633		
8.—SPECIAL SURVEY	42,062	..	42,062		
TOTAL	21 90 858	19,557	22,10,415	22,26,125	21,90 967
III.—TOOLS AND PLANT.					
9.—NAVIGATION PLANT	50	..	50		
12—MISCELLANEOUS	3,00,340	1,364	3,01,704		
13—REPAIRS AND CARRIAGE	62,566	...	62,566		
TOTAL	3,62 956	1 364	3,64 320	3,65 413	3 62 963
IV—SUSPENSE ACCOUNT.					
14—STOCK	3,80,808	16,471	3,97,279		
15.—STOCK PURCHASES	—3,641	—2,582	—6,223		
15a—STOCK SALES	57	1,494	1,551		
16—MISCELLANEOUS ADVANCES	525	4,347	4,872		
18—LONDON STORES .. .. .	..	..	..
TOTAL	3,77,749	19,730	3,97,479	..	-
GRAND TOTAL	1,58,06 056	2,89,223	1 58 05 279	1,54,52,193	1,52 31,632
V—LESS RECEIPTS ON CAPITAL ACCOUNT	62,609	..	62,609	62,609	62,609
NET TOTAL	1,55,43,447	2,89 223	1,58,32,670	1,53,89,584	1 51 69,023
APPORTIONMENT					
49—IRRIGATION WORKS	155,43,447	2,89,223	1,58,32,670	..	..

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Jhelum Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ...	2,62,20,806	27,32,635	2,89,53,441	1.—EXTENSIONS AND IMPROVEMENTS.			
Sales of water ...	1,06,871	11,156	1,18,027	1.—HEAD WORKS ...	4,86,954	—34,527	4,52,427
Supply of towns ..	5,336	223	5,559	2.—MAIN CANAL AND BRANCHES.	1,82,973	17,269	2,00,242
Receipts from Plantations	32,805	3,766	36,571	3.—DISTRIBUTARIES ...	2,56,016	27,376	2,83,392
Receipts from other Canal produce.	10,058	849	10,907	4.—DRAINAGE AND PROTECTIVE WORKS	6,297	1,993	8,290
Water power ...	1,89,481	22,378	2,11,859	TOTAL 1. ..	9,32,240	12,111	9,44,351
Rent of Buildings ...	92,721	6,342	99,063	2.—MAINTENANCE AND REPAIRS.			
Fines ..	11,320	387	11,707	1. HEAD WORKS ...	7,25,922	85,552	8,11,474
Miscellaneous and other Receipts	1,11,360	13,055	1,24,415	2. MAIN CANAL AND BRANCHES.	19,74,951	1,16,974	20,91,925
Total ...	2,67,80,778	27,90,791	2,95,71,569	3. DISTRIBUTARIES ...	17,93,296	1,10,976	19,04,272
				4. DRAINAGE AND PROTECTIVE WORKS.	69,321	2,869	72,190
				TOTAL 2 ...	45,63,490	3,16,371	48,79,861
				3.—COMPENSATION.	5,847	..	5,847
				4.—ESTABLISHMENT.			
				5.—DIRECTION AND ACCOUNT	5,07,067	48,397	(b) 5,55,464
				6 EXECUTIVE ESTABLISHMENT.	21,40,675	2,33,628	23,74,303
				7.—MEDICAL Do. ..	1,30,421	12,301	1,42,725
				7A.—REVENUE Do. ...	23,83,080	2,04,791	25,87,871
				TOTAL ...	51,61,243	4,99,120	56,60,363
				5.—TOOLS AND PLANT			
				(1) SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	4,333	790	5,123
				(2) PLANTS AND MACHINERY.	32,879	6,916	39,795
				(3) TOOLS ...	3,843	1,944	5,787
				(4) NAVIGATION PLANTS	525	541	1,066
				(5) CAMP EQUIPAGE	264	4	268
				(6) LIVE STOCK	70	464	534
				(7) OFFICE FURNITURE	3,811	2,747	6,558
				(8) MISCELLANEOUS ...	45,447	6,244	51,691
				(9) REPAIRS AND CARRIAGE	94,888	—1,301	93,587
				TOTAL ...	1,86,060	18,286	2,04,346
				6.—REFUNDS OF REVENUE.	10,186	284	10,470
				7.—PROFIT AND LOSS			
				TOTAL ...	1,08,59,066	8,46,172	1,17,05,238
				Indirect Charges debitable to Revenue Account as per Account No. 5.	7,23,449	69,877	7,93,326
				TOTAL CHARGES ...	1,15,82,515	9,16,049	1,24,98,564
				Balance Net Revenue ..	2,54,82,045	35,13,394	2,89,95,439
TOTAL RECEIPTS ..	3,70,64,560	44,29,443	4,14,94,003	GRAND TOTAL ...	3,70,64,560	44,29,443	4,14,94,003

(a) Includes Rs. 1,80,057 on account of fees for collection of Revenue.

(b) Excludes share of accounts commencing from 1912-13.

OFFICE OF ACCOUNTANT GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Jhelum Canal Project
No. 4.—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount.		Amount.
	Rs.		Rs.
Total interest charges to end of 1916-17 ..	83,63,714	Net Revenue realized to end of 1916-17 ..	2,54,82,045
Do for the year 1917-18 ..	..	Do during 1917-18 ..	35,13,394
Total outlay to end of 31st March 1918 ..	1,58,32,670		
Deduct half outlay during 1917-18 ..	1,44,611		
Mean Capital at charge ..	1,56,88,059		
Interest at 3-4730 per cent. ...	..	
	5,44,846		
Total ..	89,08,560		
Balance Revenue after defraying interest charges ..	2,00,86,879		
Total ..	2,89,95,439	Total ..	2,89,95,439

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

PARTICULARS.		Previous.	1917-18.	Total.
		Rs.	Rs.	Rs.
CAPITAL—				
Capitalization of abatement of Land Revenue ..	..	83,000	..	83,000
Leave and Pension Allowances ..	..	3,06,721	2,738	3,09,459
Total ..	..	3,89,721	2,738	3,92,459
REVENUE—				
Capitalization of abatement of Land Revenue ..	..	875	..	875
Leave and Pension Allowances ..	..	7,22,574	69,877	7,92,451
Total ..	..	7,23,449	69,877	7,93,326
GRAND TOTAL ..	..	11,13,170	72,615	11,85,785

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanction.	Total.	Charges to date.	Amount of sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ..	1,26,74,493	3,209	1,26,77,702	2,48,363	1,82,953	—82,410	1,29,23,065	Secy. No. 7376 W. 1., dated 4-10-17 .. 1,047
Establishment ..	21,90,858	109	21,90,967	19,448	35,188	18,710	22,10,415	Secy. No. 2940 W. 1., dated 13-11-17 .. 95,161
Tools and Plant ..	3,62,956	7	3,62,963	1,357	2,450	1,093	3,64,320	Secy. No. 2934 W. 1., dated 13-11-17 .. 2,432
Suspense Balances ..	..	..	..	3,97,479	..	—3,97,479	3,97,479	Secy. No. 3009 W. 1., dated 17-11-17 .. 7,766
Total ..	1,52,28,307	3,325	1,52,31,632	6,63,647	2,20,561	—4,43,086	1,58,95,279	Secy. No. 3011 W. 1., dated 17-11-17 .. 5,240
Less Receipts on Capital Account.	62,609	..	62,609	..	..	..	62,609	Secy. No. 3013 W. 1., dated 17-11-17 .. 7,827
Net Total ..	1,51,65,698	3,325	1,51,69,023	6,63,647	2,20,561	—4,43,086	1,58,32,670	Secy. No. 173 W. 1., dated 14-1-18 .. 55,813
IRRIGATION CHARGES—								Secy. No. 245 W. 1., dated 18-1-18 .. 10,830
Capitalized abatement of Land Revenue.	83,000	..	83,000	..	..	..	83,000	Secy. No. 332 W. 1., dated 25-1-18 .. 8,900
Leave and Pension Allowances.	3,06,721	15	3,06,736	2,723	..	—2,723	3,09,459	Secy. No. 381 W. 1., dated 31-3-18 .. 8,446
Total ..	3,89,721	15	3,89,736	2,733	..	—2,723	3,92,459	Secy. No. 491 W. 1., dated 31-1-18 .. 9,848
GRAND TOTAL ..	1,55,55,419	3,340	1,55,58,759	6,66,370	2,20,561	—4,45,809	1,62,25,129	Secy. No. 574 W. 1., dated 11-2-18 .. 12,124
								Secy. No. 578 W. 1., dated 11-2-18 .. 2,297
								Secy. No. 580 W. 1., dated 11-2-18 .. 7,390
								Secy. No. 582 W. 1., dated 11-2-18 .. 1,526
								Secy. No. 807 W. 1., dated 4-3-18 .. 6,424

(a). Includes Rs. 2,05,933 actual direct expenditure on Shahpur Imperial Canal.

(b). Includes Rs. 998 on account of indirect expenditure on Shahpur Imperial Canal.

Both the above will be transferred to the debit of this project on completion of the Shahpur Branch of the Lower Jhelum Canal, vide Secretary, P. W. D., Irrigation Branch, Punjab's No. 085-A. 1., dated 7th June 1905.

(c). Revised project estimate sanctioned in Secretary of State's Despatch No. 5, dated 10th February 1905.

IRRIGATION BRANCH

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Indus Inundation Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEAD OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1894).	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total.		
I.—WORKS.				Rs.	Rs.
2.—MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	9,321	..	9,321		
B.—Land	53,193	..	53,193		
D.—Regulators	77,205	..	77,205		
E.—Falls and Weirs	34,956	..	34,956		
F.—River and Hill Torrent Works ..	402	..	402		
G.—Bridges	46,971	..	46,971		
H.—Escapes	14,031	..	14,031		
K.—Buildings	1,49,097	..	1,49,097		
L.—Earthwork	13,52,682	..	13,52,682		
O.—Miscellaneous	24,588	..	24,588		
TOTAL ..	17,62,446	..	17,62,446		
3. DISTRIBUTARIES—					
A.—Preliminary Expenses	3,987	..	3,987		
B.—Land	38,157	..	38,157		
C.—Works	72,766	3,652	76,418		
L.—Earthwork	1,90,405	—2,263	1,88,142		
O.—Miscellaneous	8,536	..	8,536		
TOTAL ..	3,13,851	1,389	3,15,240		

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Indus Inundation Canals Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1894).	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total.		
4 DRAINAGE AND PROTECTIVE WORKS—					
K—Buildings	1,613	..	1,613		
L—Earthwork	3,43,078	..	3,43,078		
TOTAL	3,44,691	..	3,44,691		
TOTAL I.—WORKS	24,20,958	1,389	24,22,377	24,22,377	24,22,377
II.—ESTABLISHMENT,					
5. DIRECTION AND ACCOUNT	1,11,845	34	1,11,879		
6. EXECUTIVE	3,46,537	130	3,46,667		
7. MEDICAL	567	..	567		
TOTAL	4,58,949	164	4,59,113	4,59,113	4,59,113
III.—TOOLS AND PLANT,					
12. MISCELLANEOUS	25,072	11	25,083		
13. REPAIRS AND CARRIAGE					
TOTAL	25,072	11	25,083	25,083	25,083
IV.—SUSPENSE ACCOUNT.					
14. STOCK	60,564	—4,284	56,280		
16. MISCELLANEOUS ADVANCES	19	1,090	1,118		
18. LONDON STORES	..	..	..
TOTAL	60,583	—3,185	57,398		
GRAND TOTAL	29,65,592	—1,621	29,63,971	29,66,573	29,66,573
V. LESS RECEIPTS ON CAPITAL ACCOUNT	63,616	..	63,616	63,616	63,616
NET TOTAL	29,01,976	—1,621	29,00,355	28,42,957	28,42,957
APPORTIONMENT.					
49. IRRIGATION WORKS	21,79,463	—1,621	21,77,842		
43. M. W. AND NAVIGATION, IMPERIAL	7,22,513	..	7,22,513		

(a). Share of account excluded from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18

Indus Inundation Canals Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

Receipts.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18	Total.		Previous.	1917-18.	Total.
				1.—EXTENSIONS AND IMPROVEMENTS			
Occupiers' rates ...	23,93,007	1,28,197	25,21,204	2.—MAIN CANAL AND BRANCHES	10,44,982	19,998	10,64,980
				3.—DISTRIBUTARIES ..	72,914	3,765	76,699
Owners' rates on irrigated land.	92,159	...	92,159	4.—DRAINAGE AND PROTECTIVE WORKS.	9,82,323	45,213	10,27,536
				TOTAL I. A. ...	21,00,249	68,966	21,69,215
Sales of water ...	6,000	161	6,167	2.—MAINTENANCE AND REPAIRS.			
				2.—MAIN CANAL AND BRANCHES	68,15,611	1,40,323	67,55,934
Supply of town ..	1,418	...	1,418	3.—DISTRIBUTARIES ...	2,14,072	32,468	3,46,530
				4.—DRAINAGE WORKS ...	10,55,103	17,359	10,72,462
				TOTAL I. B. ..	79,84,786	1,90,140	81,74,926
Receipts of plantations	1,28,659	6,807	1,35,466	3.—COMPENSATION ..	6,196	54	6,250
				4.—ESTABLISHMENT	(a) 8,27,029	11,562	8,38,591
Govt. share of Dhundi Produce.	11,07,431	58,193	11,65,629	5.—DIRECTION AND ACCOUNT	25,26,841	81,277	26,08,118
				6.—EXECUTIVE ESTABLISHMENT	32,167	1,214	33,371
Receipts from other Canal Produce.	4,361	26	4,387	7.—MEDICAL ESTABLISHMENT	6,89,582	(b) 26,756	7,16,338
				7A.—REVENUE ESTABLISHMENT.	5,946	...	5,946
Rent of Buildings ...				7C.—PLANTATION ESTABLISHMENT.			
				TOTAL ...	40,81,558	1,20,809	42,02,364
Fines ...	67,342	3,502	70,844	7.—TOOLS AND PLANT			
				1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	161	706	867
Miscellaneous and other receipts.				2.—PLANTS & MACHINERY	...	...	...
				3.—TOOLS ..	218	202	415
Total ...	38,00,463	1,94,891	39,95,354	4.—NAVIGATION PLANT	343	...	343
				5.—CAMP EQUIPAGE	211	6	217
Contribution of Silt Clearance.	4,18,934	...	4,18,934	6.—LIVE STOCK ...	...	...	...
				7.—OFFICE FURNITURE	600	22	622
Clearance Rates ...	12,79,005	...	12,79,005	8.—REPAIRS & CARRIAGE	34,323	450	34,773
				9.—MISCELLANEOUS ...	37,835	—11	37,824
Total ...	54,99,002	1,94,891	56,93,893	TOTAL ...	73,686	1,375	75,061
				5.—REFUNDS OF REVENUE.	4,871	41	4,912
Share of Land Revenue collected in the Civil Department.	1,07,61,653	2,46,790	1,10,08,449	7.—PROFIT AND LOSS	1,599	...	1,599
				TOTAL ...	1,42,52,942	3,61,385	1,46,34,327
Interest on sale proceeds of waste lands benefited	42	44	86	Indirect Charges debitable to Revenue Account as per Account No. 6.	6,78,227	17,838	6,96,065
				TOTAL CHARGES ...	1,49,81,169	8,99,223	1,58,30,392
Total ...	1,07,61,695	2,46,840	1,10,08,535	Balance Net Revenue	13,29,628	42,508	13,72,036
				GRAND TOTAL ...	1,62,60,697	4,41,731	1,67,02,428
TOTAL RECEIPTS ...	1,02,60,697	4,41,731	1,07,02,428				

(a) Share of account excluded from 1912-13.

(b) Includes Rs. 6,694 on account of fees for collection of Revenue.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Indus Inundation Canals Project.

No 4—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

	Amount.		Amount.
Total Interest charges to end of 1916-17	20,36,208	Net Revenue realized to end of 1916-17 ..	13,29,528
		Do during 1917-18 ..	42,508
Total outlay to 31st March 1918 .. 29,00,355		Balance net interest charges	7,64,929
Less half outlay during 1917-18 .. —810			
Mean capital at charge .. 29,01,165			
Interest at 3-4730 per cent	1,00,757		
Total ..	21,36,965	Total ..	21,36,965

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars	Previous.	1917-18	Total
CAPITAL—			
Capitalization of abatement of Land Revenue	8,657	...	8,657
Leave and Pension Allowances	71,718	23	71,741
TOTAL	80,375	23	80,398
REVENUE—			
Capitalization of abatement of Land Revenue	25,633	925	26,558
Leave and Pension Allowances	6,52,594	16,913	6,69,507
Total	6,78,227	17,838	6,96,065
GRAND TOTAL	7,58,602	17,861	7,76,463

No 6—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE

PARTICULARS	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS			Total charges to date against old and current sanctions	REMARKS
	Expenditure against Construction Estimate	Expenditure against open canal sanctions	Total	Charges to date	Amount of Sanctioned Estimate.	Unspent Balance Estimate		
DIRECT CHARGES—								
Works	6,63,648	17,58,729	24,22,377	...	...	...	24,22,377	
Establishment	87,204	3,71,909	4,59,113	...	...	...	4,59,113	
Tools and Plant	670	24,413	25,083	...	...	...	25,083	
Suspense Balance .. ..	...	...	...	57,398	...	—57,398	57,398	
TOTAL	7,51,522	21,55,051	29,06,573	57,398	...	—57,398	29,06,573	
Less Receipts on Capital Account	63,616	...	63,616	...	...	...	63,616	
NET TOTAL	6,87,906	21,55,051	28,42,957	57,398	...	—57,398	29,00,355	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue	57	8,600	8,657	...	...	...	8,657	
Leave and Pension Allowances	19,672	52,069	71,741	...	...	...	71,741	
TOTAL	19,729	60,669	80,398	...	...	...	80,398	
GRAND TOTAL	7,07,635	22,15,720	29,23,355	57,398	...	—57,398	29,80,753	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Chenab Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction Estimate closed on 31st March 1917).	Expenditure against closed Estimates.
	Imperial.				
	Previous.	1917-18.	Total.		
I.—WORKS.	Rs.	Rs.	Rs.		
1. HEAD WORKS—					
A.—Preliminary Expenses ..	8,284	...	8,284		
B.—Land ..	88,053	6,562	94,615		
C.—Works ..	66,99,070	1,87,900	68,11,161		
K.—Buildings ..	1,00,439	...	1,00,439		
O.—Miscellaneous ..	31,743	21,531	53,274		
P.—Maintenance ..	1,35,343	...	1,35,343		
Q.—Losses of Stock ..	7,317	...	7,317		
TOTAL ..	71,60,249	1,50,816	73,11,065		
2. MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses ..	77,038	587	77,625		
B.—Land ..	9,71,780	25	9,71,805		
D.—Regulators ..	6,00,732	3,005	6,03,737		
E.—Falls and Weirs ..	9,50,027	...	9,50,027		
F. (1)—Other Cross Drainage Works ..	22,72,555	1,033	22,73,588		
G.—Bridges ..	15,74,204	5,100	15,79,304		
K.—Buildings ..	6,48,575	20,719	6,69,294		
L.—Earthwork ..	99,48,827	970	99,49,797		
M.—Plantations ..	42,031	15,731	57,762		
O.—Miscellaneous ..	60,614	1,764	62,378		
P.—Maintenance ..	3,20,077	...	3,20,077		
Q.—Losses of Stock ..	11,785	589	12,374		
TOTAL ..	1,47,85,054	51,149	1,48,36,203		
3.—DISTRIBUTARIES—					
A.—Preliminary Expenses ..	1,42,180	1,263	1,43,443		
B.—Land ..	6,22,200	30,282	6,52,482		
C.—Works ..	15,01,940	1,35,847	16,37,787		
L.—Earthwork ..	18,31,508	78,090	18,10,498		
O.—Miscellaneous ..	3,05,040	68,279	3,73,319		
P.—Maintenance ..	14,308	...	14,308		
TOTAL ..	44,18,148	3,14,661	47,32,809		

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Chenab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (construction estimate closed on 31-3-1917.)	Expenditure against closed estimates.
	Imperial.				
	Previous.	1917-18.	Total		
	Rs.	Rs.	Rs.		
4. DRAINAGE AND PROTECTIVE WORKS— A.—Preliminary Expenses	7,276	2,010	9,286		
B.—Land	1,03,821	431	1,04,252		
C.—Works	38,089	2,741	40,800		
L.—Earthwork	10,29,430	16,694	10,46,124		
O.—Miscellaneous	17,155	212	17,367		
TOTAL	11,95,741	22,088	12,17,829	...	...
TOTAL I.—WORKS	2,75,59,192	2,28,072	2,77,87,264	...	2,77,10,770
II.—ESTABLISHMENT.					
5. DIRECTION	10,89,713	4,846	10,94,559		
6. EXECUTIVE	31,77,647	55,783	32,33,430		
7. MEDICAL	1,37,290	...	1,37,290		
8. SPECIAL SURVEY	82,573	...	82,573		
8½. SPECIAL FIELD SURVEY	110	...	110		
LEAVE AND PENSION ALLOWANCES .. ..	...	...	...
TOTAL	44,87,333	60,829	45,47,962	..	45,16,718
III.—TOOLS AND PLANT.					
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	687	31	688		
2. PLANT AND MACHINERY	8,035	—3,414	5,221		
3. TOOLS	2,240	10	2,250		
4. NAVIGATION PLANT	932	229	1,161		
5. CAMP EQUIPAGE	35	..	35		
6. LIVE STOCK	574	...	574		
7. OFFICE FURNITURE	1,860	101	1,961		
8. REPAIRS AND CARRIAGE	1,25,894	...	1,25,894		
11. RAILWAY PLANT AND ROLLING STOCK	8,55,370	...	8,55,370		
12. MISCELLANEOUS	11,93,951	4,922	11,98,873		
TOTAL	21,90,148	1,879	21,92,027	...	21,93,901
IV.—SUSPENSE ACCOUNT.					
14. STOCK	6,85,049	1,11,380	7,96,438		
15. STOCK PURCHASES	—440	—3,066	—3,600		
15½. STOCK SALES	155	14,679	14,834		
16. MISCELLANEOUS ADVANCES	65	4,027	4,692		
17. LONDON STORES .. ..	...	...	...
TOTAL	6,84,829	1,27,829	8,12,453	...	...
GRAND TOTAL	3,48,21,502	4,18,209	3,53,39,711	...	3,44,20,389
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.	5,59,865	..	5,59,865	..	5,59,865
NET TOTAL	3,43,61,637	4,18,209	3,47,79,846	3,46,10,726	3,38,60,524
APPORTIONMENT.					
49. IRRIGATION WORKS	3,42,53,768	4,18,209	3,46,71,975	...	...
43. M. W. AND NAVIGATION	1,07,871	...	1,07,871	...	...

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Chenab Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL			CHARGES.	IMPERIAL.		
	Previous	1917-18.	Total		Previous	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates..	44,90,027	19,57,341	64,47,368	(1.)—EXTENSIONS AND IMPROVEMENTS.			
				(1)—HEAD WORKS ..	39,174	353	39,527
Sales of water ..	1,837	977	2,814	(2)—MAIN CANAL AND BRANCHES	2,52,415	3,527	2,55,942
				(3)—DISTRIBUTARIES ..	1,619	7,445	9,064
Water supply of towns ..	1,814	..	1,814	TOTAL (1) ..	2,93,208	11,325	3,04,533
				(2.)—MAINTENANCE AND REPAIRS.			
Receipts from Plantations ..	1,774	323	2,097	(1)—HEAD WORKS ..	2,27,718	51,723	2,85,441
				(2)—MAIN CANAL & BRANCHES	6,08,817	2,24,877	9,23,694
Receipts from other Canal produce	511	882	1,393	(3)—DISTRIBUTARIES ..	5,35,366	2,45,618	7,80,984
				(4)—DRAINAGE WORKS ..	93,946	14,889	1,08,835
				TOTAL (2) ..	15,55,847	5,43,107	20,98,954
				(3)—COMPENSATION ..	42,299	13,851	56,150
				(4)—ESTABLISHMENT.			
				(5)—DIRECTION AND ACCOUNT	84,280	54,523	1,38,803
Rent of Buildings ..	23,788	6,571	30,359	(6)—EXECUTIVE ESTABLISHMENT.	2,92,418	2,34,069	5,26,482
				7A)—REVENUE DO. ..	5,64,091	1,66,523	7,30,614
				TOTAL ..	9,40,784	4,55,115	13,95,899
				(6.)—TOOLS AND PLANT.			
Fines ..	3,594	581	4,175	(1)—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	42	—632	—590
				(2.)—PLANT AND MACHINERY	1,982	307	2,289
				(12.)—MISCELLANEOUS ..	18,080	—4,967	14,013
Miscellaneous and other Receipts	56,500	28,429	85,299	(13)—REPAIRS AND CARRIAGE	6,811	4,791	11,602
				TOTAL ..	27,815	—501	27,314
				(6)—REFUNDS OF REVENUE.	2,344	3,685	6,029
Total ..	45,80,215	19,95,104	65,75,319	TOTAL ..	28,62,297	10,26,582	38,88,879
Interest on sale-proceeds of waste lands benefited.	1,28,525	87,773	2,16,298	Indirect Charges debitable to Revenue Account as per Account No. 5.	1,31,900	63,716	1,95,625
Share of land revenue ..	3,95,089	2,65,877	6,60,966	TOTAL CHARGES ..	29,94,206	10,90,298	40,84,504
Collected in the Civil Department	5,23,614	3,53,050	8,77,264	Balance, Net Revenue ..	21,09,623	12,58,456	33,68,079
TOTAL RECEIPTS ..	51,03,829	23,48,754	74,52,583	GRAND TOTAL ..	51,03,829	23,48,754	74,52,583

(a) —Includes Rs. 47,348 on account of fees for collection of revenue.
 (b).—Excluding Share of Accounts from 1912-13.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Chenab Canal Project.

No. 4—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount.		Amount.
	Rs.		Rs.
Total Interest charges to end of 1916-17 -	83,09,216	Net revenue realized to end of 1916-17 -	21,09,623
Do. for the year 1917-18		Do. during 1917-18	12,58,456
Total outlay to end of 31st March 1918	3,47,79,846	Balance, net interest charges	61,41,779
Less half outlay during 1917-18	2,89,104		
Mean capital at charge	3,46,70,742		
Interest at 8 4/30 per cent	12,00,612		
Total	95,09,558	Total	85,09,558

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

PARTICULARS.	Previous.	1917-18	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of Land Revenue	3,69,650	6,725	3,60,375
Leave and Pension Allowances	6,20,807	5,488	6,29,385
Total	9,80,547	15,213	9,95,760
REVENUE—			
Capitalization of abatements of Land Revenue	200	...	200
Leave and Pension Allowances	1,31,709	63,716	1,95,425
Total	1,31,909	63,716	1,95,625

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS.			Total charges to date against old and current sanctions	REMARKS
	Expenditure against Construction Estimate	Expenditure against open canal sanctions.	Total.	Charges to date	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
DIRECT CHARGES—								
Works	2,75,59,192	1,51,578	2,77,10,770	76,494	64,558	—11,930	2,77,87,204	Sanction to the completion
Establishment	44,87,333	28,385	45,15,718	32,244	701	—31,483	45,47,062	
Tools and Plant	21,00,149	3,753	21,93,901	—1,874	54	1,928	21,92,027	
Suspense Balances	...	...	...	8,12,456	...	—8,12,456	8,12,456	
Total	3,42,36,673	1,84,716	3,44,20,389	9,19,322	65,373	—8,53,049	3,52,39,711	Schedule is awaited.
Less Receipts on Capital Account.	5,59,865	...	5,59,865	...	...	...	5,59,865	
Net Total	3,36,76,808	1,83,716	3,38,60,524	9,19,322	65,373	—8,53,049	3,47,79,846	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue.	3,59,650	...	3,59,650	6,725	...	—6,725	3,60,375	
Leave and Pension Allowances.	6,20,807	3,974	6,24,781	4,514	...	—4,514	6,29,385	
TOTAL	9,80,547	3,974	9,84,521	11,219	...	—11,219	9,95,760	
GRAND TOTAL	3,46,57,355	1,87,690	3,48,45,045	9,30,501	65,373	—8,65,188	3,57,75,806	

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Bari Doab Canal Project.

No 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES			Cost of construction as now estimated Construction Estimate closed on 31st March 1917.)	Expenditure against closed Estimates
	Imperial.				
	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
I.—WORKS.					
1. HEAD WORKS—					
A.—Preliminary Expenses	13,866		13,866		
B.—Land	2,22,161	804	2,23,055		
C.—Works	47,30,922	23,736	47,53,658		
K.—Buildings	1,38,744	27,613	1,66,357		
O.—Miscellaneous	21,802	6,590	28,392		
P.—Maintenance	78,796		78,796		
Q.—Losses on Stock	1,786	126	1,912		
TOTAL	52,17,077	58,059	52,75,036		
2. MAIN CANAL AND BRANCHES—					
A.—Preliminary Expenses	1,53,959		1,53,959		
B.—Land	16,882	1,176	18,058		
D.—Regulators	1,27,792		1,27,792		
E.—Falls and Weirs	4,15,853		4,15,853		
F.—River and Hill Torrent Works	671		671		
F. (1).—Other Cross Drainage Works	4,55,041	56	4,54,985		
G.—Bridges	4,70,114	548	4,70,662		
H.—Escapes	62,972	584	63,556		
K.—Buildings	10,50,519	1,45,638	11,96,357		
L.—Earthwork	33,35,771	1,412	33,37,183		
M.—Plantations	1,28,792	18,863	1,47,655		
G.—Miscellaneous	82,984	228	83,212		
P.—Maintenance	2,37,046	262	2,37,308		
Q.—Losses on Stock	405	3,925	4,330		
TOTAL	65,38,801	1,73,080	67,11,881		
3. DISTRIBUTARIES—					
A.—Preliminary Expenses	1,01,439	2,708	1,04,147		
B.—Land	1,30,744	35,543	1,66,287		
C.—Works	12,50,925	58,658	13,09,583		
L.—Earthwork	14,29,708	112,040	15,41,749		
O.—Miscellaneous	13,25,003	1,34,673	14,59,676		
P.—Maintenance	34,187	262	34,449		
TOTAL	42,72,001	3,49,890	46,15,891		
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary	7,584	1,129	8,713		
B.—Land	6,491		6,491		
C.—Works	720	2,494	3,214		
L.—Earthwork	32,782	7,661	40,443		
O.—Miscellaneous	11,410	608	12,018		
TOTAL	58,987	11,892	70,879		
TOTAL I—WORKS	1,00,86,866	5,87,821	1,06,74,687		1,02,22,773

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Bari Doab Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEAD OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated. (Construction Estimate closed on 31st March 1917)	Expenditure against closed Estimate.
	Imperial.				
	Previous	1917-18.	Total.		
II.—ESTABLISHMENT.	Rs.	Rs	Rs.	Rs	Rs
5. DIRECTION AND ACCOUNTS (a)	5,09,172	16,360	5,85,532		
6. EXPLOSIVE	24,37,831	72,751	25,10,582		
7. SPECIAL SURVEY					
TOTAL	30,07,003	89,111	30,96,114		30,32,824
III. TOOLS AND PLANT.					
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	1,994	280	2,274		
2. PLANT AND MACHINERY	11,070	..	11,070		
3. TOOLS	1,747	778	2,525		
4. NAVIGATION PLANT	4,644	10	4,654		
5. CAMP EQUIPAGE	1,440	..	1,440		
6. LIVE STOCK	289	..	289		
7. OFFICE FURNITURE	3,799	418	4,217		
8. REPAIRS AND CARRIAGE	1,15,633	4,215	1,19,848		
9. MISCELLANEOUS	10,10,687	6,236	10,16,923		
10. RAILWAY PLANT AND ROLLING STOCK ..	7,83,454	..	7,83,454		
TOTAL	19,34,767	11,937	19,46,704		19,38,175
IV.—SUSPENSE ACCOUNT.					
14. STOCK	9,05,261	—1,22,824	7,82,437		
15. STOCK PURCHASES	—4,036	—731	—4,767		
15. (a) STOCK SALES	352	117	469		
16. MISCELLANEOUS ADVANCES	430	9,281	9,711		
17. LONDON INVOICES	—1	..	—1		
18. LONDON STORES .. ..	..	..	..
TOTAL	9,02,006	—1,14,157	7,87,849		
GRAND TOTAL	2,19,30,642	5,74,712	2,25,05,354		2,11,93,772
V.—LESS RECEIPTS ON CAPITAL ACCOUNT	5,10,369	..	5,10,369		5,10,369
NET TOTAL	2,14,20,273	5,74,712	2,19,94,985	2,18,78,243	2,06,83,103
APPORTIONMENT,					
49.—IRRIGATION WORKS	2,12,82,752	5,74,712	2,18,27,464		
43.—M. W. AND NAVIGATION, IMPERIAL ..	1,67,521	..	1,67,521		

(a) Excludes share of account from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Bari Doab Canal Project.

No 3—REVENUE ACCOUNT FOR AND TO END OF 1917-18

RECEIPTS	IMPERIAL			CHARGES.	IMPERIAL		
	Previous	1917-18	Total		Previous	1917-18	Total
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ...	16,80,886	13,19,494	30,00,380	(1)—EXTENSIONS AND IMPROVEMENTS			
				1—HEAD WORKS	4,816	1,240	6,046
				2—MAIN CANAL AND BRANCHES	4,188	23,482	27,670
				3—DISTRIBUTARIES	12,159	20,078	32,224
				4—DRAINAGE AND PROTECTIVE WORKS	..	1,524	1,524
				TOTAL (1)	21,153	40,321	67,474
Sale of water ..	16,340	10,116	26,456	(2)—MAINTENANCE AND REPAIRS			
				1—HEAD WORKS	1,23,330	60,307	1,83,646
				2—MAIN CANAL AND BRANCHES	4,30,508	1,73,059	6,03,567
				3—DISTRIBUTARIES	4,84,274	1,67,547	6,51,821
				4—DRAINAGE WORKS	8,384	659	9,043
				TOTAL (2)	10,46,505	4,01,572	14,48,077
Receipts from Plantations ..	6,964	1,375	8,339	(3)—COMPENSATION			
" " other Canal produce	395	1,251	1,646	(4)—ESTABLISHMENT.			
				5—DIRECTION AND ACCOUNTS	67,090	58,089	1,20,168
Rent of Buildings ..	6,035	7,112	13,147	6—EXECUTIVE ESTABLISHMENT	1,73,163	2,23,638	3,06,801
				(7A)—REVENUE DO.	3,31,700	(a) 1,62,884	4,94,584
				TOTAL	5,71,959	4,39,591	10,11,550
Fines ..	1,471	444	1,915	(5)—TOOLS AND PLANT.			
				1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	..	909	909
				2—PLANT AND MACHINERY	..	—45,757	—45,757
				3—TOOLS	..	538	538
				4—NAVIGATION PLANT	..	339	339
				5.—CAMP EQUIPAGE	..	1,518	1,518
				6—LIVE STOCK	..	250	250
Miscellaneous and other Receipts	16,838	21,985	38,823	7.—OFFICE FURNITURE	..	320	335
				8.—REPAIRS AND CARRIAGE	..	13,269	13,269
				MISCELLANEOUS	..	—6,666	8,710
				TOTAL	16,282	—35,171	—19,889
				(C)—REFUNDS OF REVENUE	890	+1,040	1,930
				(7)—PROFIT AND LOSS.	..	..	..
				TOTAL	16,55,799	8,53,353	25,09,151
				Indirect Charges debitable to Revenue Account as per Account No. 5.	80,074	61,543	1,41,617
Total	17,28,929	13,61,770	30,90,706	TOTAL CHARGES	17,35,872	9,14,896	26,50,768
Share of Land Revenue collected in the Civil Department	3,819	6,098	9,887	Balance, Not Revenue	3,01,095	7,29,482	10,93,577
Interest on sale proceeds of waste land benefited	3,07,219	2,76,534	6,43,753				
TOTAL RECEIPTS	20,99,967	16,44,378	37,44,345	GRAND TOTAL	20,99,967	16,44,378	37,44,345

(a) Excludes share of accounts since 1912-13.

(b) Excludes Rs. 35,850 on account of Landholders' fees for 1917-18.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18

Lower Bari Doab Canal Project.

No 4—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Rs.		Rs.
Total Interest charges to end of 1916-17 ..	39,00,649	Net Revenue realized to end of 1916-17 ..	3,64,095
Do for the year 1917-18 ..		Do during 1917-18 ...	7,29,482
Total outlay to 31st March 1918 ..	2,19,94,986	Balance Interest net charges ...	35,60,978
Less half outlay during 1917-18- ..	2,87,356		
Mean capital at charge ..	7,17,07,029		
Interest at 3 1/2 per cent ..	7,58,906		
Total	46,54,555	Total	46,54,555

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18

PARTICULARS.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
CAPITAL.—			
Capitalization of Land Revenue ..	43,950	100	44,050
Leave and Pension Allowances ..	4,10,040	12,475	4,22,515
Total	4,53,990	12,575	4,66,565
REVENUE—			
Leave and Pension Allowances ..	80,074	61,543	1,41,617
Total	80,074	61,543	1,41,617

No. 6—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

Particulars.	CHARGES AGAINST CLOSED SANCTIONS			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions	Total.	Charges to date.	Amount of sanctioned Estimate.	Unspent Balance of Estimate		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ...	1,60,86,866	1,35,907	1,62,22,773	4,51,91	2,68,157	—1,86,787	1,06,74,087	Sanction to the completion of the schedule is awaited.
Establishment ..	80,07,003	25,841	80,32,824	63,290	38,776	—24,514	30,96,114	
Tools and Plant ..	19,34,767	3,408	19,38,175	8,529	2,701	5,828	19,46,704	
Suspense balances ..	..	..	..	7,87,849	..	—7,87,848	7,87,849	
Total ..	2,10,28,636	1,65,136	2,11,93,772	13,11,582	3,06,634	—10,04,948	2,25,05,384	
Less Receipts on Capital Account.	5,10,369	..	5,10,369	..	..	..	5,10,369	
Net Total ..	2,05,18,267	1,65,136	2,06,83,403	13,11,582	3,06,634	—10,04,948	21,99,49,856	
INDIRECT CHARGES—								
Capitalized abatement of Land Revenue.	43,950	..	43,950	100	..	—100	44,050	
Leave and Pension Allowances.	4,10,040	3,615	4,13,655	8,800	..	—8,800	4,22,515	
Total ..	4,53,990	3,615	4,57,605	8,900	..	—8,900	4,66,565	
GRAND TOTAL ..	2,09,72,257	1,68,751	2,11,41,008	13,20,542	3,06,634	—10,12,908	2,24,61,550	

IRRIGATION BRANCH.

PUNJAB PROVINCE,

OFFICE OF ACCOUNTANT-GENERAL,

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Jhelum Canal Project.

No. 2—CAPITAL ACCOUNTS FOR AND TO END OF 1917-18.

HEADS OF ACCOUNTS.					DIRECT CHARGES.			Cost of construction as now estimated
					Imperial			
					Previous.	1917-18.	Total.	
					Rs.	Rs.	Rs.,	Rs.
I.—WORKS.								
1.—HEAD WORKS—								
A.—Preliminary Expenses					7,349	...	7,349	
B.—Land					11,020	...	11,020	
C.—Works					1,818	...	1,818	
E.—Buildings					1,87,476	—706	1,86,771	
G.—Miscellaneous					38,021	—604	37,417	
F.—Maintenance					14,972	...	14,972	
TOTAL					2,60,656	—1,309	2,59,347	
2.—MAIN CANAL AND BRANCHES—								
A.—Preliminary Expenses					1,12,168	9,902	1,22,070	
B.—Land					9,32,325	—31	9,32,194	
D.—Regulators					32,98,533	12,722	33,11,255	
E.—Falls and Weirs					1,66,055	74	1,66,129	
F.—River and Hill Torrent Works					1,33,39,813	3,47,720	1,36,87,533	
G.—Bridges					10,33,850	22,066	10,55,916	
H.—Escapes					2,59,177	...	2,59,177	
K.—Buildings					7,17,225	71,312	7,88,537	
L.—Earthwork					1,00,80,809	45,766	1,01,26,575	
M.—Plantations					54,843	...	54,843	
O.—Miscellaneous					61,970	190	62,160	
P.—Maintenance					4,02,089	...	4,02,089	
Q.—Losses on Stock					4,537	40	4,577	
TOTAL					3,10,63,438	5,09,707	3,15,73,145	
3.—DRAINAGES—								
A.—Preliminary Expenses					43,132	—8,482	34,650	
B.—Land					2,79,103	1,81,724	4,60,827	
C.—Works					4,86,604	2,48,604	7,35,208	
L.—Earthwork					5,48,272	1,67,959	7,16,231	
O.—Miscellaneous					3,31,155	1,51,081	4,82,236	
TOTAL					15,88,266	27,42,866	24,31,132	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18

Upper Jhelum Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated.	Expenditure against Closed estimates.
	Imperial				
	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
4. DRAINAGE AND PROTECTIVE WORKS—					
A.—Preliminary Expenses	6,958	651	7,609		
C.—Works .. .. .	...	107	187		
L.—Earthwork .. .. .	...	513	513		
O.—Miscellaneous	127	1,257	1,384		
TOTAL	7,085	2,618	9,703		
TOTAL—I.—WORKS	1,30,10,625	12,53,942	3,42,73,567	3,32,65,245	3,32,31,483
II.—ESTABLISHMENT.					
5. DIRECTION AND ACCOUNT (a)	5,55,448	45,516	10,00,964		
6. EXECUTIVE	36,28,893	1,71,919	38,00,812		
7. MEDICAL	1,37,607		1,37,607		
TOTAL	47,21,948	2,17,465	49,39,413	47,62,134	47,55,586
III.—TOOLS AND PLANT.					
1. SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS	600	...	600		
2. PLANT AND MACHINERY	28,61,692	...	28,61,692		
3. TOOLS	—38	155	117		
4. NAVIGATION PLANT	1,726	214	1,940		
5. CAMP EQUIPAGE	555	...	555		
7. OFFICE FURNITURE	6,123	61	6,184		
8. REPAIRS AND CARRIAGE	1,50,615	6,437	1,57,052		
MISCELLANEOUS	15,70,401	15,172	15,85,573		
TOTAL	45,91,767	22,037	46,13,806	45,91,787	45,91,399
IV.—SUSPENSE ACCOUNT.					
14. STOCK	10,57,948	—1,70,040	8,87,908		
15. STOCK PURCHASES	—28,211	—3,610	—31,821		
15a. STOCK SALES	154	4,343	4,497		
16. MISCELLANEOUS ADVANCES	5,310	76,130	81,440		
17. LONDON INVOICES .. .. .	...	...	...
18. LONDON STORES .. .. .	...	...	...
TOTAL	10,35,201	—94,107	9,41,094		
GRAND TOTAL	4,33,68,511	13,99,330	4,47,67,880	1,26,22,166	4,25,82,148
V.—LESS RECEIPTS ON CAPITAL ACCOUNT	3,50,957	2,55,043	6,06,000	6,12,000	6,12,000
Net Total	4,30,17,554	11,44,286	4,41,65,880	4,20,10,166	4,19,70,148
APPORTIONMENT.					
49. IRRIGATION WORKS	4,29,44,036	11,44,286	4,40,88,322		
43. MINOR WORKS AND NAVIGATION, IMPERIAL	66,948	...	66,948		

(a) Excludes share of account commencing from 1912-13.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18

Upper Jhelum Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Water rates ..	74,793	5,10,331	5,85,124	(1)—EXTENSION AND IMPROVEMENTS.			
				(1.)—HEAD WORKS ..	...	28,380	28,380
				(2.)—MAIN CANAL AND BRANCHES.	64,024	31,798	95,822
Sale of water ..	291	785	1,076	(3.)—DISTRIBUTARIES ..	..	1,513	1,513
				TOTAL (1) ..	64,624	61,697	1,26,321
				(2.)—MAINTENANCE AND REPAIRS.			
Receipts from plantations ..	2	277	279	(1.)—HEAD WORKS ..	25,511	14,300	39,817
				(2.)—MAIN CANAL AND BRANCHES.	6,11,973	3,72,935	9,84,908
				(3.)—DISTRIBUTARIES ..	31,685	54,810	86,494
Rents of Buildings ..	8,378	6,592	13,970	TOTAL (2) ..	6,69,110	4,42,000	11,11,179.
				(4.)—ESTABLISHMENT.			
				(5.)—DIRECTION AND ACCOUNTS.	30,759	23,293	(b) 54,052
Fines ..	238	495	733	(6.)—EXECUTIVE ESTABLISHMENT.	1,20,574	1,02,135	2,22,709
				(7) MEDICAL ESTABLISHMENT.	..	15,701	15,701
				(7 A)—REVENUE ESTABLISHMENT	57,801	(a) 83,397	1,41,288
Miscellaneous and other Receipts.	6,195	20,616	26,811	TOTAL ..	2,09,224	2,84,526	4,93,750
				(5.)—TOOLS AND PLANT			
				(1.)—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	...	260	260
Total ..	89,000	5,38,000	6,27,000	(2.)—PLANT AND MACHINERY	...	1,000	1,000
				(3.)—TOOLS ..	29	667	696
				(4.)—Navigation Plant ..	..	231	231
TOTAL RECEIPTS ..	89,000	5,38,000	6,27,000	(7)—OFFICE FURNITURE	70	1,412	1,482
				(5.)—REPAIRS AND CARRIAGE.	7	10,039	10,046
				MISCELLANEOUS ..	10,638	—15,531	—4,893
				TOTAL ..	10,086	—1,322	9,364
				(6.)—REFUNDS OF REVENUE.	35	103	138
				TOTAL ..	9,53,058	7,87,004	17,40,752
				Indirect Charges debitable to Revenue Account as per Account No. 5.	29,292	40,534	69,826
				TOTAL CHARGES ..	9,82,980	8,27,538	18,10,578
				Balance, Net Revenue ..	—8,93,680	—2,89,502	—11,82,582
TOTAL RECEIPTS ..	89,000	5,38,000	6,27,000	GRAND TOTAL ..	59,90	5,38,006	6,27,006

(a) Includes Rs. 14,514 on account of fees for collection of Revenue.

(b) Excludes share of account.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Upper Jhelum Canal Project.

No. 4—INTEREST ACCOUNT FOR AND TO END OF 1917-18.

	Amount.		Amount.
Total Interest charges to end of 1916-17 ...	Rs. 85,23,143	Not revenue realized during 1917 18 ..	Rs. —2,89,502
Do for the year 1917-18 ...	...	Balance net interest charges ..	1,03,26,008
Total outlay to 31st March 1917 4,11,67,880			
Less half outlay during 1916-17 5,72,148			
Mean capital nt charge 4,35,58,732			
Interest at 3.4730 per cent ...	15,13,063		
Total ...	1,00,37,100		1,00,37,100

No. 5—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
CAPITAL—			
Capitalization of abatement of land Revenue ...	1,82,300	13,125	1,95,425
Leave and Pension Allowances ...	6,56,063	30,415	6,86,508
Total ...	8,38,363	43,670	8,81,933
REVENUE—			
Capitalization of abatement of Land Revenue ..	...	700	700
Leave and Pension Allowances ...	29,292	39,534	69,126
Total ...	29,292	40,534	69,526
GRAND TOTAL ..	8,67,655	84,101	9,51,759

No. 6—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE

PARTICULARS	CHARGES AGAINST CLOSED SANCTION			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimates.	Expenditure against open sanctioned.	Total.	Charges to date	Amount of Sanctioned Estimate.	Un-per cent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES—								
Works ..	3,30,19,625	2,11,958	3,72,31,483	10,12,081	33,762	10,08,322	3,12,73,567	Secy.'s No 5364 W.I. 19-12-17. 5,016
Establishment ..	47,21,918	31,618	17,56,546	1,82,547	5,568	1,77,279	49,39,113	Secy.'s No 477 W.I. 7-3-18. 16,780
Tools and Plant ..	45,01,767	2,632	15,91,399	19,197	385	19,019	16,13,906	Secy.'s No 678 W.I. 11-1-18. 17,043
Suspense Balance ...	..	..	..	9,41,091	..	9,41,091	9,41,091	
Total ..	4,23,33,310	2,19,105	4,25,52,418	21,85,422	39,715	21,45,711	4,17,67,890	39,715
Less Receipts on Capital account.	3,56,957	2,55,013	6,12,900	..	..	..	6,12,900	
Net Total ..	41,076,353	—5,036	4,19,70,418	21,85,432	39,718	21,45,711	4,11,55,860	
INDIRECT CHARGES								
Capitalized abatement of Land Revenue.	1,82,300	13,125	1,95,425	..	..	..	195,125	
Leave and Pension Allowances	6,56,063	4,817	6,60,910	25,598	..	25,598	6,86,508	
Total ..	8,38,363	17,972	8,56,335	25,598	..	25,598	8,81,933	
GRAND TOTAL ..	4,28,14,746	12,037	4,28,26,783	22,11,030	39,718	21,71,312	4,50,37,813	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18

Shahpur Canal Project - Imperial.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.			Cost of construction as now estimated (Construction estimate closed on 31st March 1894)	Expenditure against closed Estimates
	Imperial.				
	Previous	1917-18	Total.		
I—WORKS.					
2.—MAIN CANAL AND BRANCHES—	Rs.	Rs.	Rs.		
B—Land	3,028	..	3,028		
D.—Regulator	13,187	..	13,187		
G.—Bridges.. .. .	20,522	..	20,522		
L—Earthwork	80,974	—	80,974		
TOTAL	1,20,711	...	1,20,711		
3.—DISTRIBUTARIES—					
B—Land	8,210	...	8,210		
C—Works	18,551	..	18,551		
L—Earthwork	21,569	..	21,569		
TOTAL	48,340	...	48,340		
TOTAL I—WORKS	1,75,050	..	1,75,050	1,75,050	1,75,050
II—ESTABLISHMENT.					
5. DIRECTION	7,548	..	7,548		
6 EXECUTIVE	22,712	...	22,712		
TOTAL	30,260	..	30,260	30,26	30,260
III.—TOOLS AND PLANT.					
12. MISCELLANEOUS	585	...	585		
13. REPAIRS AND CARRIAGE	2	..	2		
TOTAL	613	...	613	613	613
GRAND TOTAL	2,05,933	..	2,05,933	2,05,933	2,05,933
APPORTIONMENT.					
40. IRRIGATION WORKS	2,05,933	...	2,05,933	2,05,933	2,05,933

Note—Capital and Revenue accounts of these Canals will continue to be prepared separately until the Shahpur Branch of the Lower Jhelum Canal has been constructed and opened for irrigation, vide Secretary to Govt, Punjab P.W.D., Irrigation Branch, letter No 666 A. I., dated 7-6-05.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Shahpur Canal Project—Imperial.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18	Total		Previous	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ...	22,76,810	95,186	23,72,036	(1).—EXTENSIONS AND IMPROVEMENTS.			
				2.—MAIN CANAL AND BRANCHES	82,238	..	82,238
Sales of water ..	1,315		1,315	3.—DISTRIBUTARIES	14,623	..	14,623
				TOTAL (1)	96,861	..	96,861
Receipts from Plantations ...	16,601		16,601	(2).—MAINTENANCE AND REPAIRS.			
				2.—MAIN CANAL AND BRANCHES	6,29,390	10,472	6,45,862
Receipts from other Canal Produce.	3,856		3,856	3.—DISTRIBUTARIES	1,25,625	7,143	1,32,770
				TOTAL (2)	7,55,015	23,617	7,78,632
Rent of Buildings ...	1,388		1,388	(3).—COMPENSATION	553		553
				(4).—ESTABLISHMENT.			
Fines ...	1,866		1,866	(5).—DIRECTION AND ACCOUNT	70,720	5,436	85,156
				6.—EXECUTIVE ESTABLISHMENT	4,90,443	26,916	5,17,359
Miscellaneous and other Receipts.	1,719		1,719	7.—MEDICAL Do			
				7A.—REVENUE Do			
				7B.—NAVIGATION Do			
				TOTAL	6,70,163	32,352	6,02,515
				(6).—TOOLS AND PLANT.			
				12.—MISCELLANEOUS	3,109	..	3,109
				13.—REPAIRS AND CARRIAGE	2,012	..	2,012
Total ...	23,03,504	95,186	23,98,780	TOTAL	5,121	..	5,121
				6.—REFUNDS OF REVENUE	1,233	..	1,233
				TOTAL	14,28,016	55,960	14,84,915
Share of Land Revenue collected in the Civil Department.	3,76,094	40,308	4,17,392	Indirect Charges debitable to Revenue Account as per Account No. 5.	81,204	4,529	85,823
				TOTAL CHARGES	15,10,240	60,498	15,70,738
Total ...	3,76,094	40,308	4,17,392	Balance, net Revenue	11,70,348	76,086	12,45,434
TOTAL RECEIPTS	26,80,588	1,35,584	28,16,172	GRAND TOTAL	26,80,588	1,35,584	28,16,172

(a). Includes Rs. 2,720 on account of fees for collection of revenue.

(b). Excludes share of accounts commencing from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Shahpur Canal Project—Imperial.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917-18	Total.
CAPITAL—			
Capitalization of abatement of Land Revenue	5,638	..	5,638
Leave and Pension Allowances	4,343	..	4,343
Total ..	9,981	..	9,981
REVENUE—			
Capitalization of abatement of Land Revenue	944	..	944
Leave and Pension Allowances	80,379	4,520	84,899
Total ..	81,323	4,520	85,843
GRAND TOTAL ..	91,274	4,520	95,794

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.				REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open canal sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate	Total charges to date against old and current sanctions.	
DIRECT CHARGES.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Works ..	175,060	..	175,060	-			175,060	
Establishment ...	30,260	..	30,260				30,260	
Tools and Plant ...	613	..	613				613	
Total ..	205,933	..	205,933				205,933	
Less Receipts on Capital Account.								
Net Total ..	205,933	..	205,933				205,933	
INDIRECT CHARGES.—								
Capitalized abatement of Land Revenue.	5,638	..	5,638				5,638	
Leave and Pension Allowances ..	4,343	..	4,343				4,343	
Total ...	9,981		9,981				9,981	
GRAND TOTAL ..	215,914		215,914				215,914	

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Ghaggar Canal Project.

No. 2—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.								
	Imperial.			Contribution			Total.		
	Previous.	1917-18	Total.	Previous.	1917-18.	Total	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.		Rs.
1.—WORKS.									
1. HEAD WORKS—									
B.—Land	432	..	432	288	..	288	720	..	720
C.—Works	59,817	..	59,817	30,878	..	30,878	99,695	..	99,695
K.—Buildings	2,186	..	2,186	1,458	..	1,458	3,644	..	3,644
TOTAL	62,435	..	62,435	41,624	..	41,624	..	..	1,04,069
2. MAIN CANAL AND BRANCHES									
A.—Preliminary Expenses	7,500	..	7,500	5,046	..	5,046	12,615	..	12,615
B.—Land	8,750	..	8,750	8,294	..	8,294	17,044	..	17,044
D.—Regulators	10,682	..	10,682	8,431	..	8,431	28,116	..	28,116
E.—Falls and Weirs	1,861	..	1,861	5,049	..	5,049	6,910	..	6,910
G.—Bridges	24,076	..	24,076	27,699	..	27,699	51,775	..	51,775
H.—Escapes	13,188	..	13,188	5,651	..	5,651	18,839	..	18,839
K.—Buildings	5,889	23	5,912	15,385	10	15,395	21,274	33	21,307
L.—Earthwork	77,205	..	77,205	1,10,109	..	1,10,109	1,87,314	..	1,87,314
O.—Miscellaneous	1,837	..	1,837	2,588	..	2,588	4,425	..	4,425
TOTAL	1,60,057	23	1,60,080	1,88,255	10	1,88,265	3,48,312	33	13,48,345
3. DISTRIBUTARIES—									
A.—Preliminary Expenses	403	..	403	..	..	..	403	..	403
B.—Land	3,933	..	3,933	..	..	..	3,933	..	3,933
C.—Works	17,995	..	17,995	..	..	..	17,995	..	17,995
L.—Earthwork	29,210	..	29,210	..	..	..	29,210	..	29,210
O.—Miscellaneous	14,788	..	14,788	8,745	..	8,745	23,525	..	23,525
TOTAL	66,324	..	66,324	8,745	..	8,745	75,068	..	75,068

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Ghaggar Canal Project.

No. 2.—CAPITAL ACCOUNT FOR AND TO END OF 1917-18.

HEADS OF ACCOUNT.	DIRECT CHARGES.									Cost of construction as now estimated (Construction Estimate closed on 31st March 1894.)	Expenditure against closed Estimates.
	Imperial			Contribution.			Total.				
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.		
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
4.—DRAINAGE AND PROTECTIVE WORKS.											
I.—Earthwork	5,801	..	5,801	..	..	..	5,801	..	5,801	..	...
TOTAL	5,801	..	5,801	..	...	..	5,801	..	5,801	..	...
TOTAL I.—WORKS ..	2,94,617	28	2,94,645	2,38,624	10	2,38,634	5,33,241	38	5,33,274	5,33,274	5,33,274
II.—ESTABLISHMENT.											
5.—DIRECTION AND ACCOUNT ..	13,614	1	13,615	8,453	..	8,453	22,067	1	22,068	...	...
6.—EXECUTIVE	43,628	4	43,632	30,392	2	30,394	74,020	6	74,026	...	...
7.—MEDICAL	5,555	..	5,555	..	..	..	5,555	..	5,555	...	...
LEAVE AND PENSION ALLOWANCES ..	...	..	..	5,439	..	5,439	5,439	..	5,439	...	...
TOTAL	62,797	5	62,802	44,284	2	44,286	1,07,081	7	1,07,088	1,07,088	1,07,088
III.—TOOLS AND PLANT.											
12.—MISCELLANEOUS	7,923	..	7,923	2,534	..	2,534	10,457	..	10,457	...	...
TOTAL	7,923	..	7,923	2,534	..	2,534	10,457	..	10,457	10,457	10,457
GRAND TOTAL	3,65,337	28	3,65,365	2,85,442	12	2,85,454	6,50,779	40	6,50,819	6,50,819	6,50,819
V.—LESS RECEIPTS ON CAPITAL ACCOUNT.											
NET TOTAL	3,65,337	28	3,65,365	2,85,442	12	2,85,454	6,50,779	40	6,50,819	6,50,819	6,50,819
APPORTIONMENT.											
43.—M. W. AND NAVIGATION, IMPERIAL	3,65,337	28	3,65,365	2,85,442	12	2,85,454	6,50,779	40	6,50,819	6,50,819	6,50,819

(a). Share of accounts excluded under Imperial from 1912-13.

IRRIGATION BRANCH.

OFFICE OF ACCOUNTANT-GENERAL.

PUNJAB PROVINCE.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Ghaggar Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1917-18.	Total	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Occupiers' rates ..	1,39,342	22,549	1,61,891	..	..	..	1,39,342	22,549	1,61,891
Receipts from Plantations ..	2	..	2	2	..	2	4	..	4
Receipts from other Canal produce.	..	..	..	1	..	1	1	..	1
Rent of Buildings ..	232	..	232	148	..	148	380	..	380
Fines ..	260	..	260	70	..	70	330	..	330
Miscellaneous and other Receipts.	184	..	184	120	..	120	304	..	304
Total ..	1,40,020	22,549	1,62,569	341	..	341	1,40,361	22,549	1,62,910
TOTAL RECEIPTS ..	1,40,020	22,549	1,62,569	341	..	341	1,40,361	22,549	1,62,910

IRRIGATION BRANCH.

PUNJAB PROVINCE

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Ghaggar Canal Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

Charges.	IMPERIAL.			CONTRIBUTION.			TOTAL.		
	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.	Previous.	1917-18.	Total.
(1).—EXTENSIONS AND IMPROVEMENTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(1).—HEAD WORKS ..	10,000	—3	10,000	5,629	—2	5,627	15,638	—5	15,633
(2).—MAIN CANAL AND BRANCHES	8,794	5,203	13,997	2,107	1,301	3,408	10,901	6,504	17,405
(3).—DISTRIBUTARIES ..	3,600	946	4,546	..	..	..	3,600	946	4,546
(4).—DRAINAGE AND PROTECTIVE WORKS.	801	..	801	..	..	..	801	..	801
TOTAL (1) ..	23,204	6,146	29,350	7,826	1,299	9,125	31,030	7,445	38,475
(2).—MAINTENANCE AND REPAIRS.									
(1).—HEAD WORKS ..	30,584	1,509	31,743	20,366	806	21,162	50,890	2,015	52,905
(2).—MAIN CANAL AND BRANCHES	1,02,698	4,646	108,340	61,409	1,162	62,571	1,65,107	5,810	1,70,917
(3).—DISTRIBUTARIES ..	27,736	1,015	28,751	169	..	169	27,905	1,015	28,920
(4).—DRAINAGE AND PROTECTIVE WORKS.	832	..	832	..	..	..	832	..	832
TOTAL (2) ..	1,62,800	6,672	1,69,672	81,934	1,968	83,902	2,44,734	8,840	2,53,874
(3).—COMPENSATION ..	10,908	..	10,908	..	..	..	10,908	..	10,908
(4).—ESTABLISHMENT.									
(1).—DIRECTOR AND ACCOUNT (b)	83,831	2,089	87,870	4,635	188	4,823	88,516	4,177	92,693
(5).—EXECUTIVE ESTABLISHMENT	1,87,354	14,448	2,01,822	15,401	532	15,933	2,03,845	15,000	2,18,845
(7).—MEDICAL Do. ..	6,302	..	6,302	..	..	..	6,302	..	6,302
(7 A).—REVENUE Do. ..	1,04,599	617	1,05,216	..	..	..	1,04,599	517	1,05,216
(7 D).—LEAVE AND PENSION ALLOWANCES.	..	..	..	3,958	101	4,059	2,955	101	3,056
TOTAL ..	3,53,130	19,074	3,71,210	25,081	621	25,702	3,76,217	19,895	3,96,112
(5).—TOOLS AND PLANT,									
12.—MISCELLANEOUS ..	—726	—47	—773	1,761	47	1,808	4,542	..	4,542
13.—REPAIRS AND CARRIAGE ..	3,807	..	3,807	..	..	..	..	..	..
TOTAL ..	2,781	—47	2,734	1,761	47	1,808	4,542	..	4,542
(6).—REFUNDS OF REVENUE	2,432	..	2,432	20	..	20	2,452	..	2,452
TOTAL ..	5,54,261	32,045	5,86,306	1,15,622	4,135	1,19,757	6,69,883	36,180	7,06,063
Indirect charges debitable to Revenue Accounts as per Account No. 5.	49,299	2,659	51,958	..	..	..	49,299	2,659	51,958
TOTAL CHARGES ..	6,03,560	34,714	6,38,274	1,15,622	4,135	1,19,757	7,19,182	38,840	7,58,021
BALANCE NET REVENUE ..	—4,03,540	—12,163	—4,15,703	—1,15,281	—4,135	—1,19,416	—5,78,821	—16,300	—5,95,121
GRAND TOTAL ..	1,40,020	22,551	1,62,571	341	..	341	1,40,361	22,540	+1,62,001

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Gagggar Canal Project.

No. 6.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.					Previous.	1917-18.	Total.
					Rs.	Rs.	Rs.
CAPITAL—							
Capitalization of abatement of Land Revenue					2,000	...	2,000
Leave and Pension Allowances ... { Imperial					8,792	..	8,792
... { Contribution					5,439	..	5,439
Total ...					16,231	—	16,231
Deduct—Leave and Pension Allowances debitable to Bikaner State treated as direct charges and transferred to Account No. 2 of the canal.					5,439	..	5,439
Net debitable to Imperial ...					10,792	..	10,792
REVENUE—							
Capitalization of abatement of Land Revenue							
Leave and Pension Allowances ... { Imperial					49,299	2,669	51,968
... { Contribution					2,955	101	3,056
Total ..					52,254	2,770	55,024
Deduct—Leave and Pension Allowances debitable to Bikaner State treated as direct charges and transferred to Account No. 3 of the canal.					2,955	101	3,056
Total ..					49,299	2,669	51,968

No. 6.—STATEMENT COMPARING CHARGES TO DATE WITH SANCTIONED ESTIMATE.

PARTICULARS.	CHARGES AGAINST CLOSED SANCTIONS.			CURRENT SANCTIONS.			Total charges to date against old and current sanctions.	REMARKS.
	Expenditure against Construction Estimate.	Expenditure against open current sanctions.	Total.	Charges to date.	Amount of Sanctioned Estimate.	Unspent Balance of Estimate.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
DIRECT CHARGES—								
Works ..	4,93,214	35,027	5,33,341	37	..	—33	5,33,274	
Establishment ..	1,03,970	6,111	1,70,081	..	..	—7	1,07,088	
Tools and Plant ..	10,048	409	10,457	..	..	..	10,457	
Total ..	6,09,332	41,547	6,50,779	40	..	—40	6,50,619	
Less Receipts on Capital Account.								
Net Total ..	6,09,332	41,547	6,50,771	40	..	—40	6,50,819	
INDIRECT CHARGES—								
Capitalized of statement of Land Revenue	1,900	100	2,000	..	..	..	2,000	
Leave and Pension Allowances	7,908	824	8,792	..	..	..	8,792	
Total ..	9,868	924	10,792	40	..	—40	10,792	
GRAND TOTAL ..	6,19,100	42,471	6,61,571	40	..	—40	6,61,611	

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Sutlej Inundation Canals including Hajiwah Canal Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ...	36,22,439	3,25,006	39,47,445	1.—EXTENSIONS AND IMPROVEMENTS.			
				2.—MAIN CANAL & BRANCHES ..	8,71,602	38,090	9,10,592
				3.—DISTRIBUTARIES ..	1,42,428	4,500	1,46,934
Sales of water ...	2,83 6	577	3,213	4.—DRAINAGE AND PROTECTIVE WORKS.	8,088	..	5,698
				TOTAL (1) ..	10,19,718	43,190	10,61,214
Receipts from Plantations	67,137	2,443	70,590	2.—MAINTENANCE AND REPAIRS			
				2.—MAIN CANAL & BRANCHES ..	27,97,441	78,395	28,65,836
Receipts from other Canal produce.	38,004	23	38,237	3.—DISTRIBUTARIES ..	1,00,764	13,945	1,14,609
				4.—DRAINAGE WORKS ..	3,510	..	2,540
				TOTAL (2) ..	29,51,745	92,210	30,43,955
Rent of Buildings ..				(3).—COMPENSATION ..	4,191	..	4,194
				(4).—ESTABLISHMENT ..			
				5.—DICTION AND ACCOUNT ..	4,92,165	11,210	5,03,365
Fines ..	66,024	1,182	67,206	6.—EXECUTIVE ESTABLISHMENT ..	15,58,470	40,509	16,07,047
				7.—MEDICAL Do. ..	20,002	1,524	21,526
				7 A.—REVENUE Do. ..	4,55,829	(a) 32,114	4,87,943
				TOTAL ..	25,33,565	65,740	25,99,305
Miscellaneous and other Receipts.				(5).—TOOLS AND PLANT.			
				1.—SCIENTIFIC INSTRUMENTS AND DRAWING MATERIALS.	75	25	100
TOTAL ..	37,52,219	3,41,447	41,23,676	2.—PLANT AND MACHINERY ..			
				3.—TOOLS ..	177	66	213
				4.—NAVIGATION PLANT ..			
				5.—CAMP EQUIPAGES ..	32	37	59
				6.—LIVE STOCK ..			
				7.—OFFICE FURNITURE ..	341	145	302
				8.—REPAIR AND CARRIAGE ..	18,571	767	19,338
				MISCELLANEOUS ..	27,219	—257	26,962
				TOTAL ..	40,310	775	41,085
Contribution ...	12,46,939	..	12,46,939	6.—REFUNDS OF REVENUE PROFIT AND LOSS	3,621	510	4,020
				SUSPENSE ACCOUNT	319	..	319
				Miscellaneous Advances ..	—1	60	59
Chher Labour ..	39,24,410	..	39,24,410	Stock ..	22,178	6,641	28,719
				Stock purchases ..	1	—180	—179
				Stock sales ..			
				TOTAL ..	23,178	6,427	29,605
Share of Land Revenue collected in the Civil Department.	94,85,572	3,27,553	98,13,125	Chher Labour ..	39,24,410	..	39,24,410
				TOTAL ..	1,05,04,510	4,39,201	1,09,43,711
				Indirect charges attributable to Revenue Account as per Account No. 5.	3,87,829	18,404	4,06,233
TOTAL RECEIPTS ...	1,84,08,050	6,62,000	1,90,77,050	TOTAL CHARGES (1) ..	1,09,93,810	2,52,605	1,12,46,415
				Balance, Net Revenue ..	75,14,210	4,16,395	79,30,605
				GRAND TOTAL ..	1,84,08,050	6,00,000	1,90,77,050

(a). Includes Rs. 9,332 on account of loss for collection of Revenue.

(b). Expenses accounts commencing from 1914-15

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Sutlej Inundation Canals including Hajiwah Canal Project.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalization abatement of Land Revenue...	5		5
Leave and Pension Allowance ...	3,87,795	13,404	4,01,199
Total ...	3,87,800	13,104	4,01,204

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Sutlej Inundation Canals Hajiwah Canal Project.

No. 2.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ..	5,18,048	26,243	5,44,291	(1) EXTENSIONS AND IMPROVEMENTS.			
				(2).—MAIN CANAL & BRANCHES	33,425	...	33,425
				(3).—DISTRIBUTARIES ..	15	...	15
Sales of water ...	11	..	11	TOTAL (1) ...	33,440	..	33,440
				(2).—MAINTENANCE AND REPAIRS.			
				(1).—MAIN CANAL & BRANCHES	2,67,833	—2,912	2,64,921
				(2).—DISTRIBUTARIES ..	12	...	12
Receipts from Plantations ..	157	..	157	TOTAL (2) ...	2,67,845	—2,912	2,64,933
				(3).—COMPENSATION ..			
				(4).—ESTABLISHMENT.			
				(5).—DIRECTION AND ACCOUNT	30,008	..	30,008
Receipts from other Canal produce.	25	...	25	(6).—EXECUTIVE ESTABLISHMENT.	77,810	—1,248	76,562
				7 (A).—REVENUE DO. ..	87,589	(a) 2,721	40,319
				TOTAL ...	1,45,410	1,472	1,46,882
				(8).—TOOLS & PLANT,			
				(9).—NAVIGATION PLANT ..			
Miscellaneous and other Receipts.	60	..	60	(12).—MISCELLANEOUS ..	2,717	—18	2,699
				(13).—REPAIRS AND CARRIAGE			
				TOTAL ..	2,717	—18	2,699
Total ...	5,18,341	26,243	5,44,584	— REFUNDS OF REVENUE	620	..	620
				7.—PROFIT AND LOSS ..			
				TOTAL ..	4,50,038	—1,457	4,48,581
Share of land revenue collected in the Civil Department.	5,04,918	31,124	5,36,042	Indirect Charges debitable to Revenue Account as per Account No. 5.	20,558	206	20,564
Interest on sale proceeds of waste lands benefited.				TOTAL CHARGES ...	4,70,300	—1,251	4,69,049
TOTAL ..	5,04,919	31,124	5,36,043	Balance, Net Revenue ..	5,32,863	58,618	6,11,481
TOTAL RECEIPTS ..	10,23,280	57,367	10,80,647	GRAND TOTAL ..	10,23,250	57,367	10,80,617

(a). Includes Rs. 782 on account of fees for collection of Revenue.

(b). Excludes accounts commencing from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Lower Suttlej Inundation Canals Hajiwah Canal Project.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18

Particulars—	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Leave and Pension Allowances:	20,358	206	20,564
Total	20,358	206	20,564

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.
ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Chenab Inundation Canals Project

No. 3 -REVENUE ACCOUNT FOR AND TO END OF 1917-18

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18	Total		Previous.	1917-18	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occurrence rate ..	23,33,957	2,17,943	30,51,833	(1)-EXTENSIONS AND IMPROVEMENTS.			
				(2)-MAIN CANAL & BRANCHES	9,01,012	8,237	9,11,246
Sales of water ..	3,527	65	3,692	(3)-DISTRIBUTING	1,50,248	6,044	1,57,192
				(4)-DRAINAGE AND PROTECTIVE WORKS	25,416	998	26,414
Receipts from Plantations ..	91,664	1,655	1,13,129	TOTAL (1)	10,76,794	16,172	10,94,578
Receipts from other Canal produce.	42,336	62	42,422	(5)-MAINTENANCE AND REPAIRS			
Redeem Paddings ..	1,751	255	1,904	(2)-MAIN CANAL & BRANCHES	32,14,781	69,721	33,01,502
				(3)-DISTRIBUTING	1,33,876	7,468	1,41,044
Fines ..	40,627	328	41,035	(4)-DRAINAGE WORKS	61,036	2,333	63,299
Miscellaneous and other Receipts	3,425	68	3,492	TOTAL (2)	34,62,233	79,552	35,41,545
				(6)-COMPENSATION	1,932	..	1,932
Total ..	30,20,011	2,37,949	32,57,960	(7)-ESTABLISHMENT			
				(8)-DIRECTION AND ACCOUNTS	5,22,270	10,035	5,32,305
Contribution ..	11,47,509	..	11,47,509	(9)-EXECUTIVE ESTABLISHMENT			
Chowkidari ..	24,08,114	..	24,08,114	(10)-MEDICAL Do	16,77,658	3,940	17,11,593
				(11)-HYGIENE Do	..	..	..
				TOTAL	21,99,927	4,976	22,46,903
				(12)-TOOLS & PLANT			
				(13)-MISCELLANEOUS	31,511	477	31,988
				(14)-REPAIRS AND CARriage	..	..	..
				TOTAL	31,511	477	31,988
				(15)-REFUNDS OF REVENUE	91,91	219	98,19
				7.-PROFIT AND LOSS	425	..	425
				TOTAL	67,51,795	1,13,705	68,65,700
				CHIEF LABOUR	21,08,114	..	21,08,114
				TOTAL	91,92,509	1,43,522	93,35,901
Share of Civil revenue collected in the Civil Department	95,77,113	3,01,355	1,01,81,468	Indirect Charges debitable to Revenue Account as per Account No. 6.	3,57,820	6,576	3,64,396
				TOTAL CHARGES	95,50,329	1,49,971	97,01,330
				Balance No Revenue	69,02,117	3,92,373	72,94,820
Total Receipts ..	1,61,62,776	5,42,311	1,69,95,120	GRAND TOTAL	1,61,62,776	5,42,311	1,69,95,120

(a) - In Rs. 5/10 on a count of fee for collection of Revenue.

(b) - Excludes accounts commencing from 19,2,13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Chenab Inundation Canals Project.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalization abatement of Land Revenue...	8,586	"	8,586
Leave and Pension Allowance ...	3,49,284	6,576	3,55,860
Total ...	3,57,870	6,576	3,64,446

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Muzaflargarh Inundation Canals Project.

No. 3.—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ..	34,59,237	2,83,609	37,62,846	1.—EXTENSIONS AND IMPROVEMENTS			
Sales of water ..	1,862	492	2,354	2.—MAIN CANAL & BRANCHES.	7,30,416	12,762	7,43,178
Receipts from plantations ..	1,28,782	14,808	1,43,600	3.—DISTRICTUARIES ..	1,24,073	25,997	1,50,070
Receipts from other Canal produce.	7,582	326	7,907	4.—DRAINAGE AND PROTECTIVE WORKS.	20,338	..	20,338
Fines ..	21,060	752	21,812	TOTAL (1) ..	8,74,827	38,759	9,13,586
Miscellaneous and other Receipts.	9,480	2,789	12,269	2.—MAINTENANCE AND REPAIRS			
TOTAL ..	36,86,013	2,02,776	39,40,789	2.—MAIN CANAL & BRANCHES	20,87,350	1,28,680	31,16,945
Contribution ..	8,01,279	..	8,01,279	3.—DISTRICTUARIES ..	3,13,320	30,520	3,52,840
Chher Labour ..	24,34,233	..	24,34,233	4.—DRAINAGE WORKS ..	30,603	355	40,048
Total ..	68,73,626	8,02,776	71,76,300	TOTAL (2) ..	35,40,372	1,08,461	35,08,833
Share of land revenue collected in the Civil Department.	1,10,89,388	3,80,910	1,14,36,304	(3)—COMPENSATION ..	7,632	..	7,632
TOTAL RECEIPTS ..	1,79,12,913	6,99,691	1,86,12,604	(4)—ESTABLISHMENT ..			
				5.—DIRECTION AND ACCOUNT	6,33,679	20,031	6,53,710
				6.—EXECUTIVE ESTABLISHMENT.	14,69,202	52,460	15,31,662
				7.—REVENUE ..	7,00,672	(a) 35,173	7,41,745
				TOTAL ..	26,09,453	1,11,564	26,27,117
				(5)—TOOLS AND PLANT			
				1.—SCIENTIFIC INSTRUMENTS	367	175	542
				2.—PLANT AND MACHINERY..			
				3.—TOOLS ..	1,406	420	1,816
				4.—NAVIGATION ..	..	..	..
				5.—CAMP EQUIPAGE ..	82	..	82
				6.—LIVE STOCK ..	..	..	..
				7.—OFFICE FURNITURE ..	389	142	511
				8.—REPAIRS AND CARriage..	21,167	1,400	22,576
				12.—MISCELLANEOUS ..	36,972	—408	35,265
				TOTAL TOOLS AND PLANT ..	60,158	1,740	61,893
				(6). REFUNDS OF REVENUE	1,180	..	1,180
				(7). PROFIT AND LOSS ..	4	..	4
				(8). SUSPENSE ACCOUNT			
				Miscellaneous Advances ..	251	—251	..
				Stock ..	46,423	—9,427	36,985
				Stock sales ..	..	4	4
				Stock purchases ..	—1,840	1,840	..
				London stores ..	4	..	..
				TOTAL ..	44,847	—7,854	36,989
				Chher Labour ..	24,34,233	..	24,34,233
				TOTAL ..	95,72,697	3,18,770	98,91,467
				Indirect charges debitab to Revenue Account as per Account No 5.	4,12,907	16,473	4,29,380
				Total charges ..	99,85,604	3,35,243	1,03,20,847
				Balance, Not Revenue ..	79,27,309	3,61,418	82,91,757
				GRAND TOTAL ..	1,79,12,913	6,90,691	1,86,12,604

(a). Includes Rs. 7,857 on account of fee for collection of Revenue

(b). Excludes share of accounts commencing from 1912-13.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Muzafiargah Inundation Canals Project.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous	1917-18.	Total.
	Rs.	Rs.,	Rs
REVENUE—			
Capitalization of abatement of Land Revenue ..	18,353	...	18,353
Leave and Pension Allowance ..	3,94,862	16,473	4,11,025
Total	4,12,907	16,473	4,29,380

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Shahpur Canal Project.—Provincial.

No. 3.—REVENUE ACCOUNTS FOR AND TO END OF 1917-18.

RECEIPTS.	PROVINCIAL.			CHARGES.	IMPERIAL.		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates	8,86,369	48,501	9,28,870	(1) EXTENSIONS AND IMPROVEMENTS.			
				(2) — MAIN CANAL & BRANCHES.	33,683	..	33,583
				(3) — DISTRIBUTARIES	11,487	...	11,487
Sales of water	8,023	...	8,023	TOTAL (1)	45,070	...	45,070
				(2).—MAINTENANCE AND REPAIRS.			
Receipts from Plantations	5,108	...	5,108	(2) — MAIN CANAL & BRANCHES.	2,62,283	10,842	2,73,125
				(3).—DISTRIBUTARIES	70,043	2,761	72,804
Receipts from other Canal Produce.	400	...	400	TOTAL (2) M. & R.	3,32,326	13,603	3,45,929
				(3).—COMPENSATION	62	...	62
Water power	926	...	926	(4).—ESTABLISHMENT			
				(5) — DIRECTION AND ACCOUNT.	56,711	4,618	61,329
				(6).—EXECUTIVE ESTABLISHMENT			
				(7) — MEDICAL Do	3,37,801	(a) 25,210	0,63,014
				7 (A.) — REVENUE Do			
Fines	713	...	713	TOTAL	3,94,512	29,828	4,24,310
Miscellaneous and other Receipts.	3,600	..	3,600	(5) — TOOLS & PLANT.			
				(12) — MISCELLANEOUS	1,437	..	1,437
				(13).—REPAIRS AND CAN- DIGAL.	1,693	..	1,698
				TOTAL	5,130	...	3,180
				7.—PROFIT AND LOSS	616	..	616
Total	8,99,322	48,861	47,822	TOTAL	7,75,16	43,431	8,19,147
				Indirect Charges debitable to Revenue Account as per Account No. 5.	36,923	4,176	61,099
Share of Land Revenue collected in the Civil Department.	1,88,177	19,032	2,08,109	TOTAL CHARGES	8,52,639	47,607	8,80,246
				Balance, Net Revenue	2,54,860	20,826	2,75,686
TOTAL RECEIPTS	10,87,499	68,432	11,53,932	GRAND TOTAL	10,87,499	68,483	11,55,932

(a). Includes Rs. 1,210 Lambardar fee.

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Shahpur Canal Project.—Provincial.

No. 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.
REVENUE—			
Capitalization of abatement of Land Revenue	1,698	...	1,698
Leave and Pension Allowances	56,230	4,176	59,406
Total	56,928	4,176	61,699

OFFICE OF ACCOUNTANT-GENERAL

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Ravi Inundation Canals Project.

No. 3—REVENUE ACCOUNT FOR AND TO END OF 1917-18.

RECEIPTS.	IMPERIAL.			CHARGES	IMPERIAL		
	Previous.	1917-18.	Total.		Previous.	1917-18.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Occupiers' rates ...	1,05,273	...	1,05,273	(1)—EXTENSIONS AND IMPROVEMENTS			
				(2)—MAIN CANAL & BRANCHES	500	...	500
				Total (1) ..	500	...	500
				(2)—MAINTENANCE AND REPAIRS			
Salaries of staff ...	277	..	277	(21)—MAIN CANAL & BRANCHES	89,597	..	89,597
				(3)—DISTRIBUTARIES	9,522	...	9,522
				Total (2) M and R ..	99,119	...	99,119
				(3)—COMPENSATION	54	...	54
				(4)—ESTABLISHMENT			
				(5)—DICTION AND ACCOUNTS	(a) 22,052	1,641	23,693
				(6)—FISCAL ESTABLISHMENT			
Grants ...	77	...	77	(7)—MATERIAL DO ...	1,15,053	...	1,15,053
				(7A)—REVENUE DO.			
				TOTAL ..	1,37,105	1,641	1,38,746
				(5)—TOOLS & PLANT			
				(12)—MATERIALS ..	1,722	...	1,722
				(13)—REPAIRS AND CAPITAL	915	...	915
Miscellaneous and other Receipts	...	...	...	TOTAL ..	2,637	..	2,637
				6—REFUNDS OF REVENUE	1,000	..	1,000
Total ...	1,05,614	...	1,05,614	TOTAL ...	2,40,101	1,641	2,41,742
				Indra. Charges debitable to Revenue Account as per Account No. 5	19,191	230	19,421
State of Land Revenue collected in the Canal Department	1,21,555	—1,770	1,22,508	TOTAL CHARGES ..	2,59,593	1,871	2,61,464
				Balance Net Revenue ..	—24,390	—3,647	—28,037
TOTAL RECEIPTS ...	2,35,197	—1,770	2,33,427	GRAND TOTAL ..	2,35,197	—1,770	2,33,427

IRRIGATION BRANCH.

PUNJAB PROVINCE.

OFFICE OF ACCOUNTANT-GENERAL.

ADMINISTRATIVE ACCOUNTS FOR THE YEAR 1917-18.

Ravi Inundation Canals Project.

No 5.—ACCOUNT OF INDIRECT CHARGES FOR AND TO END OF 1917-18.

Particulars.	Previous.	1917 18	Total
	Rs.	Rs	Rs.
REVENUE —			
Leave and Pension Allowances ..	19,194	230	19,424
Total ...	19,194	230	19,424

